

Department of Electrical & Electronics Engineering Ajay Kumar Garg Engineering College, Ghaziabad Project-1 (KEN-753) B.Tech (VII SEM), Session:-2023-24						
Approved Project List						
S.No	University No.	Name of the Student	Section	Project Topic	Guide Name	Group
1	2000270210097	Yash Gautam	EN-2	Greenhouse Automation	Mr. Mahesh Sharna, Ms. Deepti Singh	1
2	2000270210092	Vansh Rastogi	EN-2			
3	2000270310182	Vidhi Tripathi	ECE-3			
4	2000270310175	Tushar Sharma	ECE-3			
5	2000270210080	Siddharth Kumar Singh	EN-2	Multi Role UAV	Mr. Dinanath Prasad, Mr. Vikram Singh	2
6	2000270210072	Sameer Chhonkar	EN-2	Crop monitoring System	Mr. Mahesh Sharna, Ms. Suvarna Majumdar	3
7	2000270310105	Nitya Singh	ECE-2			
8	2000270310094	Mansi Nijhawan	ECE-2			
9	2000270310110	Pradhumn Sachan	ECE-2			
10	200270210069	Raj Singh	EN-2	Speed Control of Electric Vehicle	Mr. Gaurav Srivastava Mr. Dinanath Prasad	4
11	2000270210077	Shupra Yadav	EN-2			
12	2000270210089	Tripti Tiwari	EN-2			
13	2000270210044	Manish Jaiswal	EN-1			
14	2100270219005	Mohit Kumar Maheshwari	EN-2	Design & Development of Horizontal Flow Wrapping Machine	Dr. Nitisha Shrivastava, Mr. Mahesh Sharma	5
15	2100270219004	Harsh Kumar Pathak	EN-2			
16	2100270219002	Awaz Bhardwaj	EN-2			
17	2100270219001	Anurag Kumar Gupta	EN-2			
18	2000270210053	Osho Bhardwaj	EN-2	Smart Solar Traker with solar Tree	Mr. Parveen Kumar, Mr. Ritesh Sharma	6
19	2000270210051	Nitin Jha	EN-2			
20	2000270210060	Prateek Singh	EN-2			
21	2000270210075	Shekhar Tripathi	EN-2			
22		Rahul Prakash	EN-2			
23	2000270210052	Om Nigam	EN-2	Blood tracker	Mr. Parveen Kumar, Mr. Ritesh Sharma	7
24	2000270210056	Pragya srivastava	EN-2			
25	2000270210005	Abhishek Singh	EN-1	Two wheeler electric charger	Mr. Arun Kr. Maurya Dr. J.G. Yadav	8
26	2000270210011	Aman Malik	EN-1			
27	2000270210033	Gargi Gupta	EN-1			
28	2000270210014	Anshul Bhardwaj	EN-1			
29	2000270210032	Gagan Bharadwaj	EN-1	Powering The Electric Bicycle	Dr. Sarika Kulra, Mr. Necraj Gupta	9
30	2000270210034	Gaurav Tomar	EN-1			
31	2000270210035	Gaurav Pandey	EN-1			
32	2000270210038	Harshit Awasthi	EN-1			
33	2000270210024	Ayushi Singh	EN-1	Density based traffic Management system using PLC & SCADA	Mr. Mahendra Dutt Dwivedi	10
34	2000270210012	Aman prakash verma	EN-1			
35	2000270210012	Mansi jaiswal	EN-1			
36	2000270210008	Aditya Kumar Verma	EN-1			
37	2000270210009	Akash Singh	EN-1	Automatic Regulation of Valves for release of water	Dr Anil Kr. Rai,	11
38	2000270210048	Mohammad Kasim	EN-1			


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39	2000270210001	Aasutosh Mishra	EN-1	based on soil Moisture of Crops using AI or ML	Mr. Neeraj Gupta	11
40	2000270210010	Akhil Pratap Singh	EN-1			
41	2000270210083	Sudheer Mahor	EN-2	IoT based energy meter theft alert with smart recharge & overload Detection System	Mr. Gaurav Srivastava	12
42	2000270210088	Pranjal Singh	EN-2			
43	2000270210090	Tushar Gupta	EN-2			
44	2000270210082	Sujan	EN-2			
45	2000270210047	Medhavi Aggarwal	EN-1	CANSAT	Mr. Neeraj Gupta, Dr. Sarika Kalra	13
46	2000271830026	Kripanjali Yadav	CSE (AIML)			
47	2002270210037	Harsh Prakash Tripathi	EN-1	Wireless Power Transfer with improved efficiency	Dr. Sarika Kalra, Mr. Mahendra Dutt Dwivedi	14
48	2002270210037	Devanshu Singhal	EN-1			
49	2002270210037	Abhishek Yadav	EN-1			
50	2002270210037	Sudhesh Srivastava	EN-2			
51	2000270210057	Pranav Singhal	EN-2	Automatic bottle filling and capping machine using PLC	Mr. Mahendra Dutt Dwivedi	15
52	2100270219003	Deepanshu Sharma	EN-1			
53	2000270210013	Aman Srivastava	EN-1			
54	2000270210023	Ayush Yadav	EN-1			
55	2000270210073	Shantanu Shrivastava	EN-2	Automatic Stamping and Sorting Machine using PLC	Dr. Sarika Kalra	16
56	2000270210071	Ritu Bisht	EN-2			
57	2000270210063	Purna Balodi	EN-2			
58	2000270210074	Shashank Rawat	EN-2			
59	2000270210085	Suraj Patel	EN-2	Vehicle to Vehicle IoT Charger	Dr. J. G. Yadav, Mr. Parveen Kumar	17
60	2000270210086	Suyash Mishra	EN-2			
61	2000270210019	Asim Htasham	EN-1	Air Purifier Automated Rover	Mr. Ravindra Kumar, Mr. Arun Kr. Maurya	18
62	2000270210002	Abhinav Bansal	EN-1			
63	2000270210070	Rajat Sharma	EN-2			
64	2000270210065	Pranshu Singh	EN-2			
65	2000270210016	Anup Kashyap	EN-1	Cattle Health monitoring system using Labview and Machine Learning for early Detection of Diseases	Ms. Nupur Mittal, Mr. Dhanath Prasad	19
66	2000270310089	Komal Sharma	ECE			
67	2000270310069	Faizya Akhtar	ECE			
68	2000270210043	Kuldeep Sahu	EN-1	Smart Helmet using IoT	Dr. Vani Bhargava, Ms. Navjyoti Sharma	20
69	2000270210040	Himanshu Chaudhry	EN-1			
70	2000270210046	Mayank Dubey	EN-1			
71	2000270210091	Vaibhav Kumar Mishra	EN-2			
72	2000270210031	Divyanshu Chaudhary	EN-1	Smart Shopping Cart	Mr. Arun Kr. Maurya, Dr. Nitisha Shrivastava	21
73	2000270210078	Shubh Mahajan	EN-2			
74	2000270210030	Divyanksh	EN-1			
75	2000270210087	Syed Shamail Ali	EN-2			
76	2000270210059	Yash Pratap	EN-2			
77	2000270210088	Tanu	EN-2			
				Piezo- sensor tile for	Ms. Nupur Mittal,	22

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78	2000270310193	Yashdeep Tyagi	ECE	Electricity Generation	Ms Nidhi Singh	--
79	2000270210015	Anubhav Kumar Baranwal	EN-1	Fault Detection and protection of Induction motor using PLC and Sensors	Mr. Mahendra Dutt Diwivedi	23
80	2000270210003	Abhishek Jaiswal	EN-1			
81	2000270219006	Shivam Agrahari	EN-1			
82	2000270210004	Abhishek Patel	EN-1			
83	2000270210066	Punya	EN-2	UAVs Driver Assistant Model	Mr. Dinanath Prasad *	24
84	2000270210061	Pratyush Kumar	EN-2			
85	2000270310136	Gaurav Raj	EN-1			
86	2000270310129	Disha Singh	EN-1			
87	2000270210055	Piyush Jaiswal	EN-2	Vehicle to Grid Integration to IoT	Dr. Vani Bhargava, Ms. Navjyoti Sharma	25
88	2000270210067	Rachit Srivastava	EN-2			
89	2000270210054	Palak Maithili	EN-2			
90	2000270210064	Prince Kr. Shukla	EN-2			
91	2000270210079	Shubh Vats	EN-2	Design & Analysis of MSA (microstrip patch Antenna) for wireless Applications	Ms. Nidhi Singh, Mr. Parveen Kumar	26
92	2000270210093	Varchaswa Singh	EN-2			
93	2000270210062	Praveen Kushwaha	EN-2	VAAYU (Agriculture Drone with variable payload)	Mr. Neeraj Gupta	27
94	2000270210095	Vijendra Kr. Gupta	EN-2			
95	2000270210094	Vidhi Srivastava	EN-2			
96	2000270210096	Vishal Shukla	EN-2			
97	2000270210007	Adarsh Mishra	EN-1	(WEMS) Waste Energy Management System	Mr. Ravindra Kumar	28
98	2000270210042	Naveen Mishra	EN-1			
99	2000270210042	Krishna Kant Patel	EN-1			
100	2000270210028	Dipanshu Tripathi	EN-1			
101	2000270210020	Astha Chaudhary	EN-1	Mobile ROBOT for Navigation	Dr. Anil Kr. Rai	29
102	2000270210021	Ayush Kumar Gupta	EN-1			
103	2000270210025	Ayushman Prakhar	EN-1			
104	2100279219007	Shivani	EN-1			
105	2000270210017	Aryan	EN-1	Computerised cognitive retaining program for the people with disabilities	Mr. Praveen Dhull	30
106	2000270210027	Diksha Singh	EN-1			
107	2000270210041	Jasmine Sharma	EN-1			


Dr Sarika Kalaria
Project Coordinator

Dr. (Prof.) Hemant Ahuja
HOD, EN

C.C
Mr. Ravindra Kumar
Project Co-Coordinator


Director
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Project Report

on -

**Vehicle to Vehicle(V2V) IOT(Internet of Things) Based
Charger**

Submitted in partial fulfillment of the requirements for the award of the
degree of

BACHELOR OF TECHNOLOGY

in

ELECTRICAL ENGINEERING & ELECTRONICS ENGINEERING

by

SURAJ PATEL (2000270210085)

SUYASH MISHRA (2000270210086)

Under the Supervision

of

DR. J.G. YADAV

(Associate Professor)

Department of Electrical and Electronics Engineering &

MR. PRAVEEN DHULLI

(Assistant Professor)

Department of Electrical and Electronics Engineering



Ajay Kumar Garg Engineering College, Ghaziabad

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Uttar Pradesh, 201009

Dr. A.P.J. Abdul Kalam Technical University, Lucknow, Uttar Pradesh

Year: 2023-24


Director
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Dr. A.P.J. Abdul Kalam Technical University, Lucknow, Uttar Pradesh

Year 2023-24


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Ghaziabad



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

DECLARATION

We hereby declare that the work being presented in the report entitled “**Vehicle to Vehicle(V2V) IOT(Internet of Things) Based Charger**” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical and Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2022 to May, 2023 under the supervision of **Dr. J. G. Yadav** Associate Professor and **Mr. Praveen Dhull** Assistant Professor, Department of Electrical and Electronics Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge

Suraj Patel
(2000270210085)

Suraj Patel

Suyash Mishra
(2000270210086)

Suyash



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CERTIFICATE

This is to certify that the project report entitled “**Vehicle to Vehicle(V2V) IOT(Internet of Things) Based Charger**” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in Electrical & Electronics Engineering** of **Dr. A. P. J. Abdul Kalam Technical University, Lucknow**, is bona fide record of work submitted by Suraj Patel(2000270210085), Suyash Mishra(2000270210085) under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Dr. J.G. Yadav
Associate Professor
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AKGEC, Ghaziabad

Mr. Praveen Dhull
Assistant Professor
EN Department
AKGEC, Ghaziabad

Dr. Lokesh Varshney
Head Of Department
EN Department
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Director
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ACKNOWLEDGEMENT

I acknowledge the effort and dedication put forth in conducting this dissertation. The successful completion of this study represents a significant contribution to the field of Electric Vehicles and Energy Storage Systems. I would like to express my gratitude to **Dr. J.G. Yadav (Associate Professor)**, **Mr. Praveen Dhull (Assistant Professor)**, and **Dr. Lokesh Varshney (Professor and Head of Department)** in Electrical and Electronics Engineering for all of their help in the research project, including advice, support, and encouragement.

I am appreciative to my institution for providing the necessary resources, infrastructure, and information access required to carry out this dissertation.

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Project Report
On

CATTLE HEALTH MONITORING SYSTEM

*Submitted in partial fulfilment of the
requirements for the award of the degree*

of

BACHELOR OF TECHNOLOGY

in

**ELECTRICAL AND ELECTRONICS ENGINEERING &
ELECTRONICS AND COMMUNICATION ENGINEERING**

By

ANUP KASHYAP (2000270210016)
KOMAL SHARMA (2000270310089)
FAIZIYA AKHTAR (2000270310069)

Under the supervision
of

Mr. Dinanath Prasad (Asst. Professor EN Department)

And

Mrs. Suvarna Mujumdar (Asst. Professor ECE Department)



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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

YEAR: 2023 - 2024


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And

Mrs. Suvarna Mujumdar (Asst. Professor ECE Department)



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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

YEAR: 2023 – 2024


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Ghaziabad

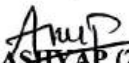


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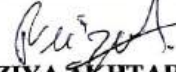
GHAZIABAD

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled “ **CATTLE HEALTH MONITORING SYSTEM**” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfilment of the requirements for the award of the degree of Bachelor of Technology in Electrical And Electronics Engineering Department of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from September, 2023 to May, 2024 under the supervision of **Mr. Dinanath Prasad** (Asst. Pro EN Dept.) *and Mrs. Suvarna Mujumdar* (Asst. Pro ECE Dept.) . The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.


ANUP KASHYAP (2000270210016)


KOMAL SHARMA (2000270310089)


FAIZIYA AKHTAR (2000270310069)


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GHAZIABAD**

CERTIFICATE

This is to certify that the project report entitled “**CATTLE HEALTH MONITORING SYSTEM**” submitted to **Ajay Kumar Garg Engineering College, Ghaziabad**, in partial fulfilment of the requirements for the award of the degree of **Bachelor of Technology in Electrical and Electronics & Electronics and Communication Engineering** of **Dr. A. P. J. Abdul Kalam Technical University, Lucknow**, is bona fide record of work submitted by Anup Kashyap (2000270210016), Komal Sharma (2000270310089) and Faiziya Akhtar (2000270310069) under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

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Designation: Assistant Professor
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PROF. LOKESH VARSHNEY
Head of Department
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ACKNOWLEDGEMENT

We take this opportunity to express our deep sense of gratitude and regard to **Mr. Dinanath Prasad (Asst. Professor, EN Department)** and **Mrs. Suvarna Mujumdar (Asst. Professor, ECE Department)** and Ajay Kumar Garg Engineering College, Ghaziabad for his/her continuous encouragement and able guidance, we needed to complete this project. We would pay our sincere gratitude to **Prof. LOKESH VARSHNEY** for his precious and enlightening words of wisdom which motivated us throughout our project work.

We also wish to thank all the faculty members and staff of the EN and ECE departments for their support and assistance. Lastly, we express our deepest appreciation to our family and friends for their understanding, patience, and encouragement throughout the duration of our project.

6-20 20

Project Report
on
COST EFFECTIVE IOT BASED SMART HELMET
*Submitted in partial fulfillment of the
requirements for the award of the degree
of*
BACHELOR OF TECHNOLOGY

in
ELECTRICAL & ELECTRONICS ENGINEERING

by
KULDEEP SAHU (2000270210043)
HIMANSHU CHAUDHARY (2000270210040)
VAIBHAV MISHRA (2000270210091)
MAYANK DUBEY (2000270210046)

Under the supervision
of
Dr. VANI BHARGAVA
Associate Professor
Department of Electrical & Electronics Engineering

Ms. NAVJYOTI SHARMA
Assistant Professor
Department of Electrical & Electronics Engineering



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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year: 2023 - 2024


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Project Report
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Under the supervision
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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year: 2023 – 2024

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AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled "**COST EFFECTIVE IOT BASED SMART HELMET**" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical & Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2023 to May, 2024 under the supervision of **Dr. Vani Bhargava**, Associate Professor, Department of Electrical & Electronics Engineering and **Ms. Navjyoti Sharma**, Assistant professor, Department of Electrical & Electronics Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

KULDEEP SAHU
(2000270210043)

VAIBHAV MISHRA
(2000270210091)

HIMANSHU CHAUDHARY
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MAYANK DUBEY
(2000270210046)



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CERTIFICATE

This is to certify that the project report entitled “**COST EFFECTIVE IOT BASED SMART HELMET**” submitted to **Ajay Kumar Garg Engineering College, Ghaziabad**, in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in Electrical & Electronics Engineering** of **Dr. A. P. J. Abdul Kalam Technical University, Lucknow**, is bona fide record of work submitted by **Kuldeep Sahu (2000270210043)**, **Vaibhav Mishra (2000270210091)**, **Himanshu Chaudhary (2000270210040)** and **Mayank Dubey (2000270210046)** under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.


Dr. Vani Bhargava

Associate Professor

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Ms. Navjyoti Sharma

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ACKNOWLEDGEMENTS

I extend my heartfelt gratitude to Dr. Hemant Ahuja, Director of Ajay Kumar Garg Engineering College (AKGEC), for his unwavering support and encouragement throughout this project. His vision and leadership have provided the platform for students like me to engage in innovative projects and push the boundaries of technological advancement.

I am deeply grateful to Dr. Lokesh Varshney, Head of the Department of Electrical and Electronics Engineering (EN) at AKGEC, for his constant guidance and encouragement. His expertise and insights have been invaluable in shaping this project and broadening my understanding of the subject matter.

I would like to thank Dr. Vani Bhargava, Associate Professor in the Department of Electrical and Electronics Engineering and Ms. Navjyoti Sharma, Assistant Professor in the Department of Electrical and Electronics Engineering for her invaluable mentorship, guidance, and support throughout this project. Her expertise and dedication have been instrumental in guiding me through the intricacies of IoT-based technologies and Smart Helmet systems.

Furthermore, I am grateful to the Department of Electrical and Electronics Engineering at AKGEC for providing me with the necessary resources and infrastructure to carry out this project successfully.

Lastly, I would like to thank my family and friends for their unwavering support and encouragement throughout this endeavor.

Project Report

on

SMART SHOPPING CART

*Submitted in partial fulfillment of the requirements for the award
of the degree of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL & ELECTRONICS ENGINEERING

by

DIVYANSHI CHAUDHARY (2000270210031)

SHUBH MAHAJAN (2000270210078)

DIVYAKSH (2000270210030)

YASH PRATAP (2000270210099)

SYED SHAMAIL ALI (2000270210087)

Under the supervision of

Mr. Arun Kumar Maurya

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Dr. Nitisha Shrivastava

Assistant Professor

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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year: 2023 - 2024


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SYED SHAMAIL ALI (2000270210087)

Under the supervision of

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Assistant Professor

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Dr. Nitisha Shrivastava

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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year: 2023 – 2024


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Ghaziabad



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

DECLARATION

I hereby declare that this submission is our own work and that, to the best of our knowledge and belief, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma by the university or other institute of higher learning, except where due acknowledgement has been made in the text.

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**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CERTIFICATE

This is to certify that Project Report entitled "SMART SHOPPING CART" which is submitted by Divyanshi Jha, Divyaksh, Shubh Mahajan, Yash Partap, Syed Shamil Ali in the partial fulfillment of requirement for the award of degree of Bachelor of Technology (Electrical and Electronics Engineering) submitted to Dr. A.P.J. Abdul Kalam Technical University, Lucknow is a record of students' own work carried out under my supervision. The matter in this report has not been submitted to any University or Institution for award of any degree.


SUPERVISOR :

Asst. Prof. Arun Kumar Maurya
E.E. Department

MODERATOR: Dr. Lokesh Sir

Date: 17-05-2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

ACKNOWLEDGEMENT

ke this opportunity to express our deep sense of gratitude and regard to Mr. Arun Kumar Maurya, Asst. Prof. (Dept.), Ajay Kumar Garg Engineering College, Ghaziabad for his continuous encouragement and able guidance, aided to complete this project.

ould pay our sincere gratitude to the Head of the Dept. (EN), Dr. Lokesh Sir for his precious and enlightening words of wisdom which motivated us throughout our project work.


Director
Ajay Kumar Garg Engg. College
Ghaziabad

G-22

Project Report
on

SUSTAINABLE ENERGY PRODUCTION THROUGH PIEZOELECTRIC TILES

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

TANU (2006270212080)
YASHDEEP TYAGI (20062702150190)

Under the supervision
of

Ms. NEHRA MITTAL
Assistant Professor
Department of ELECTRICAL AND ELECTRONICS

And

Ms. NIDHI SINGH
Assistant Professor
Department of ELECTRICAL AND ELECTRONICS



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Dohla Bypass Road, Adhartala, Ghaziabad, Uttar Pradesh
201009

Dr. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year : 2023 - 2024

AKG
Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
on

**SUSTAINABLE ENERGY PRODUCTION THROUGH
PIEZOELECTRIC TILES**

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

**TANU (2000270210088)
YASHDEEP TYAGI (2000270310193)**

Under the supervision
of

Ms. NUPUR MITTAL
Assistant Professor
Department of ELECTRICAL AND ELECTRONICS

And

Ms. NIDHI SINGH
Assistant Professor
Department of ELECTRICAL AND ELECTRONICS



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad-
201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year : 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled "SUSTAINABLE ENERGY PRODUCTION THROUGH PIEZOELECTRIC TILES" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical and Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2023 to May, 2024 under the supervision of **Ms. Nupur Mittal**, Assistant Professor, Department of Electrical and Electronics and **Ms. Nidhi Singh**, Assistant Professor, Department of Electrical and Electronics. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

TANU (2000270210088)

YASHDEEP TYAGI (2000270310193)



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CERTIFICATE

This is to certify that the project report entitled “SUSTAINABLE ENERGY PRODUCTION THROUGH PIEZOELECTRIC TILES” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical and Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is bona fide record of work submitted by Tanu (2000270210088), Yashdeep Tyagi (2000270310193) under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Nupur
Ms. NUPUR MITTAL
Supervisor
Assistant Professor
Department of Electrical and Electronics
AKGEC, Ghaziabad

[Signature]
Dr. LOKESH VARSHNEY
HOD
Department of Electrical and
Electronics
AKGEC, Ghaziabad

Nidhi
Ms. NIDHI SINGH
Supervisor
Assistant Professor
Department of Electrical and Electronics
AKGEC, Ghaziabad

ACKNOWLEDGEMENTS

We take this opportunity to express our deep sense of gratitude and regard to **Ms. Nupur Mittal Asst. Prof. (EN Dept.)** and **Ms. Nidhi Singh Asst. Prof. (EN Dept.)**, **Ajay Kumar Garg Engineering College, Ghaziabad** for their continuous encouragement and able guidance, we needed to complete this project.

We would pay our sincere gratitude to the Head of the Dept. (EN), **Dr. Lokesh Varshney**, for his precious and enlightening words of wisdom which motivated us throughout our project work.

4-23

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Project Report
on
**FAULT DETECTION & PROTECTION OF INDUCTION MOTOR USING
PLC**

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL & ELECTRONICS ENGINEERING

by

**SHIVAM AGRAHARI (2100270219006)
ABHISHEK JAISWAL (2000270210003)
ABHISHEK PATEL (2000270210004)
ANUBHAV KUMAR BARANWAL (2000270210015)**

Under the supervision of

Mr. Mahendra Dutt Dwivedi

Asst. Professor

Department of Electrical & Electronics Engineering

&

Mr. D.K SINGH

Asst. Professor

Department of Mechanical Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year: 2023 - 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
on
**FAULT DETECTION & PROTECTION OF INDUCTION MOTOR USING
PLC**

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL & ELECTRONICS ENGINEERING

by

**SHIVAM AGRAHARI (2100270219006)
ABHISHEK JAISWAL (2000270210003)
ABHISHEK PATEL (2000270210004)
ANUBHAV KUMAR BARANWAL (2000270210015)**

Under the supervision of

Mr. Mahendra Dutt Dwivedi

Asst. Professor

Department of Electrical & Electronics Engineering

&

Mr. D.K SINGH

Asst. Professor

Department of Mechanical Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad-201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year: 2023 - 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled "**FAULT DETECTION & PROTECTION OF INDUCTION MOTOR USING PLC**" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical & Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2023 to May, 2024 under the supervision of **Mr. Mahendra Dutt Dwivedi**, Asst. Professor, Department of Electrical & Electronics Engineering & **Mr. D. K. Singh**, Asst. Professor, Department of Mechanical Engineering,

The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Abhishek Jaiswal

ABHISHEK JAISWAL
(2000270210003)

Shivam

SHIVAM AGRAHARI
(2100270219006)

Abhi

ABHISHEK PATEL
(2000270210004)

Anubhav Baranwal

ANUBHAV KUMAR BARANWAL
(2000270210015)



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CERTIFICATE

This is to certify that the project report entitled “**FAULT DETECTION & PROTECTION OF INDUCTION MOTOR USING PLC**” submitted to **Ajay Kumar Garg Engineering College, Ghaziabad**, in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in Electrical & Electronics Engineering** of **Dr. A.P.J. Abdul Kalam Technical University, Lucknow**, is bona fide record of work submitted by **Shivam Agrahari (2100270219006)**, **Abhishek Jaiswal (2000270210003)**, **Abhishek Patel (2000270210004)** And **Anubhav Kumar Baranwal (2000270210015)** under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Mr. Mahendra Dutt Dwivedi
Supervisor
Asst. Professor
Department of EN
AKGEC, Ghaziabad

Dr. Lokesh Varshney
HOD Of EN Department
AKGEC, Ghaziabad

Mr. D. K. Singh
Co-Supervisor
Asst. Professor
Department of Mechanical Engineering
AKGEC, Ghaziabad

Director
Ajay Kumar Garg Engg. College
Ghaziabad

ACKNOWLEDGEMENTS.

We take this opportunity to express our deep sense of gratitude and regard to **Mr. Mahendra Dutt Dwivedi** (Asst. Professor EN Dept.) and **Mr. D.K. Singh** (Asst. Professor Mech. Dept.), of Ajay Kumar Garg Engineering College, Ghaziabad for their continuous encouragement and able guidance, we needed to complete this project. We would pay our sincere gratitude to **Dr. Lokesh Varshney**, HOD of EN Department & **Prof. Ashiv Shah**, Head of TIFAC Core for their precious and enlightening words of wisdom which motivated us throughout our project work.

9-24 10-24

Project Report
on
SMART ATTENDANCE SYSTEM USING FACIAL
RECOGNITION AND RADIO FREQUENCY IDENTIFICATION

Submitted in partial fulfillment of the
requirements for the award of the degree
of

BACHELOR OF TECHNOLOGY
in

ELECTRICAL & ELECTRONICS ENGINEERING
by

PUNYA (2000270210066)
PRATYUSH KR. GAUTAM (2000270210061)
GAURAV RAJ (2000270210036)
DISHA SINGH (2000270210029)

Under the supervision
of

Mr. Dinanath Prasad
Assistant Professor
Department of Electrical
& Electronics Engineering

Ms. Gaganpreet Kaur
Assistant Professor
Department of Mechanical Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year: 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report

on

**SMART ATTENDANCE SYSTEM USING FACIAL
RECOGNITION AND RADIO FREQUENCY IDENTIFICATION**

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL & ELECTRONICS ENGINEERING

by

**PUNYA (2000270210066)
PRATYUSH KR. GAUTAM (2000270210061)
GAURAV RAJ (2000270210036)
DISHA SINGH (2000270210029)**

Under the supervision
of

Mr. Dinanath Prasad
Assistant Professor
Department of Electrical
& Electronics Engineering

Ms. Gaganpreet Kaur
Assistant Professor
Department of Mechanical Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW
Year: 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CANDIDATE'S DECLARATION

We, the undersigned, hereby declare that the work presented in this report titled "SMART ATTENDANCE SYSTEM USING FACIAL RECOGNITION AND RADIO FREQUENCY IDENTIFICATION", submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical & Electronics Engineering of DR. A.P.J. Abdul Kalam Technical University, Lucknow, is an original work carried out by us during the period from August 2023 to June 2024. This work has been conducted under the supervision of **Mr. Dinanath Prasad** (Asstt. Professor), Department of Electrical & Electronics Engineering and **Ms. Gaganpreet Kaur** (Asstt. Professor), Department of Mechanical Engineering. We further declare that the matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of our knowledge.

Punya
PUNYA
(2000270210066)

Pratyush
PRATYUSH KR. GAUTAM
(2000270210061)

Gaurav
GAURAV RAJ
(2000270210036)

Disha
DISHA SINGH
(2000270210029)



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CERTIFICATE

This is to certify that the project report entitled “ **SMART ATTENDANCE SYSTEM USING FACIAL RECOGNITION AND RADIO FREQUENCY IDENTIFICATION**” submitted to **Ajay Kumar Garg Engineering College, Ghaziabad** , in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in Electrical & Electronics Engineering of Dr. A.P.J.Abdul Kalam Technical University, Lucknow**, is a bona fide record of work carried out by **Punya (2000270210066)**, **Pratyush Kumar Gautam (2000270210061)**, **Gaurav Raj (2000270210036)**, **Disha Singh (2000270210029)** under my supervision during the period from **01-09-2024 to 01-02-2024** The report reflects their original work and to the best of my knowledge, the matter presented in thisreport has not been submitted to any other university or institution for the award of any degree.

Mr. Dinanath Prasad
Supervisor
Assistant Professor
Department of Electrical
& Electronics Engineering

HOB EN
Dr.Lokesh Varshney
Professor & Head
Department of Electrical
& Electronics Engineering
AKGEC, Ghaziabad

Ms. Gaganpreet Kaur
Co-Supervisor
Assistant Professor
Department of Mechanical
Engineering

ACKNOWLEDGEMENT

The successful culmination of this project, titled "Smart Attendance System Using Facial Recognition and RFID," is deeply indebted to the invaluable support and guidance we received from esteemed individuals. We express our sincerest gratitude to our project supervisors, Mr. Dinanath Prasad and Ms. Gaganpreet Kaur, whose constant encouragement, insightful feedback, and meticulous supervision were instrumental throughout the research and development process. Their expertise and dedication significantly shaped this project, guiding it from its inception to its final form.

We are also thankful to the faculty members of the Department of Electrical & Electronics Engineering for their unwavering support. Their dedication to fostering a stimulating academic environment greatly enriched our learning. We extend our appreciation to the department's staff for their assistance in securing the necessary equipment and resources.

Finally, we express our deepest gratitude to our families and friends for their unwavering encouragement, patience, and understanding throughout this challenging yet rewarding endeavor. Their unwavering support played a significant role in motivating us to persevere and achieve our goals.

6-25

Project Report
On
Vehicle To Grid Integration with IoT
*Submitted in partial fulfilment of the
requirements for the award of the degree
of*
BACHELOR OF TECHNOLOGY
in
ELECTRICAL AND ELECTRONICS ENGINEERING
by

PIYUSH JAISWAL (2000270210055)
PALAK MAITHILI (2000270210054)
PRINCE SHUKLA (2000270210065)
RACHIT SRIVASTAVA (2000270210067)

Under the Supervision of:
Dr. VANI BHARGAVA
Associate Professor
Department of Electrical and Electronics Engineering
Ms. NAVJYOTI SHARMA
Assistant Professor
Department of Electrical and Electronics Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW
Year : 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
On
Vehicle To Grid Integration with IoT

*Submitted in partial fulfilment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY
in

ELECTRICAL AND ELECTRONICS ENGINEERING
by

PIYUSH JAISWAL (2000270210055)

PALAK MAITHILI (2000270210054)

PRINCE SHUKLA (2000270210064)

RACHIT SRIVASTAVA (2000270210067)

Under the Supervision of:

Dr. VANI BHARGAVA

Associate Professor

Department of Electrical and Electronics Engineering

Ms. NAVJYOTI SHARMA

Assistant Professor

Department of Electrical and Electronics Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW
Year : 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CANDIDATES' DECLARATION

We hereby declare that this submission is our own work and that, to the best of our knowledge and belief, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma by the university or other institute of higher learning, except where due acknowledgement has been made in the text.

Piyush Jaiswal

PIYUSH JAISWAL (2000270210055)

Palak Maithili

PALAK MAITHILI (2000270210054)

Prince Shukla

PRINCE SHUKLA (2000270210064)

Rachit Srivastava

RACHIT SRIVASTAVA (2000270210067)



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CERTIFICATE

This is to certify that the Project report entitled “**Vehicle To Grid Integration with IoT**” which is submitted by **Piyush Jaiswal, Palak Maithili, Prince Shukla, and Rachit Srivastava** in the partial fulfillment of the requirement for the award of degree of Bachelor of Technology (Electrical and Electronics Engineering) submitted to Dr.A.P.J. Abdul Kalam Technical University, Lucknow is a record of students’ own work carried out under my supervision. The matter in this report has not been submitted to any University or Institution for the award of any degree.

Dr. Vani Bhargava
Associate Professor
Department of Electrical and Electronics
Engineering

Ms. Navjyoti Sharma
Assistant Professor
Department of Electrical and Electronics
Engineering

Dr. Lokesh Varshney
Prof & Head
Department of Electrical and Electronics
Engineering

ACKNOWLEDGEMENT

We take this opportunity to express our deep sense of gratitude and regard to **Dr. Vani Bhargava ma'am** (Associate Professor EN Department) and **Ms. Navjyoti Sharma** (Asst. Professor EN Department) of **Ajay Kumar Garg Engineering College, Ghaziabad** for her continuous encouragement and able guidance, needed to complete this project. We would pay our sincere gratitude to **Dr. Lokesh Varshney** for his precious and enlightening words of wisdom which motivated us throughout our project work.

We also want to acknowledge the contribution of all our faculty members for their kind assistance and cooperation during the development of our project. Finally, we acknowledge our friends for their contribution to the completion of the project.

6-26

Project Report
on

Infrared Controlled Water Management System

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

**SHUBH VATS (2000270210079)
VARCHASWA SINGH (2000270210093)**

Under the supervision
of

Mr. PRAVEEN DHULL
Assistant Professor

Department of Electrical and Electronics Engineering

Ms. NIDHI SINGH
Assistant Professor

Department of Electrical and Electronics Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW
Year : 2023 – 2024-


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
on

Infrared Controlled Water Management System

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

**SHUBH VATS (2000270210079)
VARCHASWA SINGH (2000270210093)**

Under the supervision
of

Mr. PRAVEEN DHULL

Assistant Professor

Department of Electrical and Electronics Engineering

Ms. NIDHI SINGH

Assistant Professor

Department of Electrical and Electronics Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year : 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled “**Infrared Controlled Water Management System**” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical and Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2023 to May, 2024 under the supervision of **Mr. Praveen Dhull**, Assistant Professor, Department of Electrical and Electronics Engineering and **Ms. Nidhi Singh**, Assistant Professor, Department of Electrical and Electronics Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

SHUBH VATS
(2000270210079)

VARCHASWA SINGH
(2000270210093)

Director
Ajay Kumar Garg Engg. College
Ghaziabad



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CERTIFICATE

This is to certify that the project report entitled “**Infrared Controlled Water Management System**” submitted to **Ajay Kumar Garg Engineering College, Ghaziabad**, in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in Electrical and Electronics Engineering** of **Dr. A. P. J. Abdul Kalam Technical University, Lucknow**, is bona fide record of work submitted by **Shubh Vats and Varchaswa Singh** under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Mr. Praveen Dhull
Supervisor
Assistant Professor
Department of Electrical and Electronics
AKGEC, Ghaziabad

Ms. Nidhi Singh
Supervisor
Department of Electrical and
Electronics Engineering
AKGEC, Ghaziabad

Dr. Lokesh Varshney
Prof & Head
Department of Electrical and Electronics
Engineering
AKGEC, Ghaziabad

ACKNOWLEDGEMENTS

I take this opportunity to express my deep sense of gratitude and regard to **Mr. Praveen Dhull (Asst. Professor EN Department)** and **Ms. Nidhi Singh (Asst. Professor EN Department)**, of **Ajay Kumar Garg Engineering College, Ghaziabad** for their continuous encouragement and able guidance, needed to complete this project. I would pay my sincere gratitude to **Dr. Lokesh Varshney** for his precious and enlightening words of wisdom which motivated us throughout our project work.

I also want to acknowledge the contribution of all my faculty member for their kind assistance and cooperation during the development of my project. At last, I want to acknowledge my friends for their contribution in completion of the project.

6-27

Project Report
on

VAAYU: AGRICULTURAL DRONE

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

PRAVEEN KUSHWAHA (2000270210062)

VIDHI SRIVASTAVA (2000270210094)

VIJENDRA KR. GUPTA (2000270210095)

VISHAL SHUKLA (2000270210096)

Under the supervision
of

Dr. LOKESH VARSHNEY (HOD EN Department)

Mr. NEERAJ GUPTA (Asst. Prof, EN Department)

Department of Electrical and Electronics Department



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW
Year: 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
on

VAAYU: AGRICULTURAL DRONE

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

**PRAVEEN KUSHWAHA (2000270210062)
VIDHI SRIVASTAVA (2000270210094)
VIJENDRA KR. GUPTA (2000270210095)
VISHAL SHUKLA (2000270210096)**

Under the supervision
of

**Dr. LOKESH VARSHNEY (HOD EN Department)
Mr. NEERAJ GUPTA (Asst. Prof. EN Department)**
Department of Electrical and Electronics Department



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW
Year: 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled "VAAYU: AGRICULTURAL DRONE" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical and Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2023 to May, 2024 under the supervision of **MR. NEERAJ GUPTA**, Assistant Professor, Department of Electrical and Electronics Engineering and **DR. LOKESH VARSHNEY**, HOD EN. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

PRAVEEN KUSHWAHA (2000270210062)

VIDHI SRIVASTAVA (2000270210094)

VIJENDRA KR. GUPTA (2000270210095)

VISHAL SHUKLA (2000270210096)

i

Director
Ajay Kumar Garg Engg. College
Ghaziabad



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CERTIFICATE

This is to certify that the project report entitled “VAAYU : AGRICULTURAL DRONE” submitted to **Ajay Kumar Garg Engineering College, Ghaziabad**, in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in Electrical and Electronics Engineering** of **Dr. A. P. J. Abdul Kalam Technical University, Lucknow**, is bona fide record of work submitted by Praveen Kushwaha (2000270210062), Vidhi Srivastava (2000270210094), Vijendra Kr. Gupta (2000270210095) and Vishal Shukla (2000270210096) under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Mr. NEERAJ GUPTA
Assistant Professor
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Dr. LOKESH VARSHNEY
Head Of Department
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ACKNOWLEDGEMENT

It gives us a great sense of pleasure to present the report of the B. Tech Project undertaken during B. Tech Final Year. We owe a special debt of gratitude to Assistant Professor **Mr. Neeraj Gupta**, Department of Electrical & Electronics Engineering, Ajay Kumar Garg Engineering College, Ghaziabad for his constant support and guidance throughout the project. His sincerity, thoroughness and perseverance have been a constant source of inspiration for us. It is only because of his cognizant efforts that our endeavors have been seen light of the day.

We also take the opportunity to acknowledge the contribution of **Dr. Lokesh Varshney**, Head of Department of Electrical & Electronics Engineering, Ajay Kumar Garg Engineering College, Ghaziabad for his full support and assistance during the project development.

We also do not like to miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind assistance and cooperation during the development of our project. Last but not the least, we acknowledge our friends for their contribution in the completion of the project.

ABSTRACT

This project involves designing and developing a versatile unmanned aerial vehicle (UAV) optimized for multiple payload applications, with a primary focus on detecting agricultural crop diseases. The drone is equipped with advanced sensors, including high-definition cameras, gyroscopes, and GPS, allowing for the easy integration of various payloads tailored to specific tasks. A key feature of this UAV is its incorporation of machine learning technology, specifically a Convolutional Neural Network (CNN), for real-time analysis and identification of crop diseases from aerial images. This approach has the potential to transform agricultural practices by enabling precise and early detection of diseases, thus minimizing crop losses and enhancing yields.

The project details the construction of the drone, highlighting material selection to ensure durability and weight optimization. It also outlines the machine learning pipeline, from data collection and model training to real-time deployment on the drone for in-field analysis. Our results demonstrate the UAV's ability to accurately identify crop diseases, indicating its potential for broader applications such as surveillance, delivery, and environmental monitoring.

Additionally, the project utilizes the YOLO (You Only Look Once) algorithm, known for its real-time performance and high accuracy in object detection. Unlike traditional methods that require multiple stages for detection, YOLO employs a single convolutional neural network to simultaneously predict bounding boxes and class probabilities. This makes it ideal for applications requiring rapid processing, such as surveillance, autonomous vehicles, and drone operations.

6-28 28

A Project Report
on
WASTE ENERGY MANAGEMENT SYSTEM FOR EVs

Submitted in partial fulfilment of the
requirements for the award of the degree

of
BACHELOR OF TECHNOLOGY

in
ELECTRICAL AND ELECTRONICS ENGINEERING

by
ADARSH MISHRA (2000270210007)
NAVEEN MISHRA (2000270210049)
KRISHNAKANT PATEL (2000270210042)
DIPANSHU TRIPATHI (2000270210028)

Under the Supervision

of
Mr. RAVINDRA KUMAR
ASSISTANT PROFESSOR

Department of ELECTRICAL AND ELECTRONICS ENGINEERING



AJAY KUMAR GARG ENGINEERING COLLEGE, GHAZIABAD
Dr. A.P.J ABDUL KALAM TECHNICAL UNIVERSITY

Year: 2023-2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

A Project Report
on
WASTE ENERGY MANAGEMENT SYSTEM FOR EVs
Submitted in partial fulfilment of the
requirements for the award of the degree
of
BACHELOR OF TECHNOLOGY
in
ELECTRICAL AND ELECTRONICS ENGINEERING

by
ADARSH MISHRA (2000270210007)
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AJAY KUMAR GARG ENGINEERING COLLEGE, GHAZIABAD
Dr. A.P.J ABDUL KALAM TECHNICAL UNIVERSITY

Year: 2023-2024


Director
Ajay Kumar Garg Engg. College
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**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABD**

CANDIDATE'S DECLARATION

We hereby declare that the work being presented in the report entitled “**WASTE ENERGY MANAGEMENT SYSTEM FOR EVs**” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical & Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2023 to May, 2024 under the supervision of **Mr. RAVINDRA KUMAR** Assistant Professor, Department of Electrical & Electronics Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any best of my knowledge.

ADARSH MISHRA (2000270210007)

NAVEEN MISHRA (2000270210049)

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I


Director
Ajay Kumar Garg Engg. College
Ghaziabad



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CERTIFICATE

This is to certify that project report entitled “WASTE ENERGY MANAGEMENT SYSTEM FOR EVs” submitted to **Ajay Kumar Garg Engineering College, Ghaziabad**, in partial fulfilment for the award of the degree of **Bachelor of Technology** in Department of **Electrical & Electronics Engineering** of **Dr. A.P.J Abdul Kalam Technical University, Lucknow**, is a bona fide record of work submitted by Adarsh Mishra (2000270210007), Naveen Mishra (2000270210049), Krishnakant Patel (2000270210042), Dipanshu Tripathi (2000270210028) under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any other degree to the best of my knowledge.

Mr. RAVINDRA KUMAR

Assistant Professor

**Department of ELECTRICAL
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ENGINEERING**

AKGEC, Ghaziabad

Dr. LOKESH VARSHNEY

Prof & Head

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AKGEC, Ghaziabad

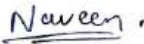
ACKNOWLEDGEMENT


It gives us a great sense of pleasure to present the report of the B. Tech Project undertaken during B. Tech Final Year. We owe special debt of gratitude to **Mr. Ravindra Kumar**, Assistant Professor, Department of Electrical & Electronics Engineering, Ajay Kumar Garg Engineering College, Ghaziabad for his constant support and guidance throughout the course of our work. His sincerity, thoroughness and perseverance have been a constant source of inspiration for us. It is only his cognizant efforts that our endeavors have been seenlight of the day.


We also take the opportunity to acknowledge the contribution of **Dr. Lokesh Varshney, Professor & Head**, Department of Electrical & Electronics Engineering, Ajay Kumar Garg Engineering College, Ghaziabad for his full support and assistance during the development of the project.

We also do not like to miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind assistance and cooperation during the development of our project. Last but not the least, we acknowledge our friends for their contribution in the completion of the project.

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Name: Dipanshu Tripathi
Roll No.: 2000270210028
Date:

ABSTRACT

The use of green energy is becoming increasingly more important in today's world. Therefore, electric vehicles are currently the best choice for the environment in terms of public and personal transportation. Because of its high energy and current density, lithium-ion batteries are widely used in electric vehicles. Unfortunately, lithium-ion batteries can be dangerous if they are not operated within their Safety Operation Area (SOA). Therefore, a battery management system (BMS) must be used in every lithium-ion battery, especially for those used in electric vehicles. In this work, the purpose, functions and topologies of BMS are discussed in detail. In addition, early battery models along with the hardware and system designs for BMS are covered in a literature review. Then, an improved battery model is introduced, and simulation results are shown to verify the model's performance. Finally, the design of a novel BMS hardware system and its experimental results are discussed. The possible improvements for the battery models and BMS hardware are given in the section on conclusions and future work. We will monitor various aspects of the vehicles like current, Voltage, SOC and temperature with the help of Node MCU which is the Wi-fi enabled microchip that will send the data or crucial parameters to the server therefore in this way we can monitor these parameters from anywhere and also monitor battery.

6-29

Project Report
on

**ROBOT BASED MOBILE NAVIGATION FOR OBSTACLE
DETECTION**

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

**ASTHA CHOUDHARY (2000270210020)
AYUSH KUMAR GUPTA (2000270210021)
AYUSHMAN PRAKHAR SRIVASTAVA (2000270210025)
SHIVANI(2100270219007)**

Under the supervision
of

Dr. Anil Kumar Rai
Professor
Department of Electrical and Electronics



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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW
MAY, 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
on

ROBOT BASED MOBILE NAVIGATION FOR OBSTACLE DETECTION

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

**ASTHA CHOUDHARY (2000270210020)
AYUSH KUMAR GUPTA (2000270210021)
AYUSHMAN PRAKHAR SRIVASTAVA (2000270210025)
SHIVANI(2100270219007)**

Under the supervision
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Dr. Anil Kumar Rai
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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW
MAY, 2024



Director
Ajay Kumar Garg Engg. College
Ghaziabad





AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

DECLARATION

We hereby declare that the work being presented in the report entitled “**Robot based Mobile Navigation for Obstacle Detection**” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical and Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2023 to May, 2024 under the supervision of **Dr. Anil Kumar Rai**, Department of Electrical and Electronics Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

ASTHA CHOUDHARY (2000270210020) 

AYUSH KUMAR GUPTA (2000270210021) 

AYUSHMAN PRAKHAR SRIVASTAVA (2000270210025) 

SHIVANI (2100270219007) 



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CERTIFICATE

This is to certify that the project report entitled “**Robot based Mobile Navigation for Obstacle Detection**” submitted to **Ajay Kumar Garg Engineering College, Ghaziabad**, in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in Electrical and Electronics Engineering** of **Dr. A.P.J. Abdul Kalam Technical University, Lucknow**, is bona fide record of work submitted by Astha Choudhary (2000270210020), Ayush Kumar Gupta (2000270210021), Ayushman Prakhar Srivastava (2000270210025) And Shivani (2100270219007) under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Dr. Anil Kumar Rai
Supervisor
Professor
Department of Electrical and Electronics
Engineering
AKGEC, Ghaziabad

Dr. Lokesh Varshney
Prof & Head
Department of Electrical and
Electronics Engineering
AKGEC, Ghaziabad

Director
Ajay Kumar Garg Engg. College
Ghaziabad

ACKNOWLEDGEMENT

I take this opportunity to express our deep sense of gratitude and regard to **Mr. Anil Kumar Rai** (Professor EN Department) of **Ajay Kumar Garg Engineering College, Ghaziabad** for his continuous encouragement and able guidance, needed to complete this project. We would pay our sincere gratitude for his precious and enlightening words of wisdom which motivated us throughout our project work.

I also want to acknowledge the contribution of all my faculty members for their kind assistance and cooperation during the development of our project.

I would like to acknowledge the contributions of my colleagues and friends who provided valuable insights and feedback during brainstorming sessions and discussions. I am also grateful to my family for their unwavering support and understanding during the demanding phases of this project. Their encouragement and patience were crucial in sustaining my motivation.

Lastly, I express my appreciation to all those who, directly or indirectly, contributed to the realization of this project. Your support has been instrumental, and I am truly thankful.

ABSTRACT

Autonomous mobile robots for safe navigation of complicated settings , needs to be able to reliably recognize and avoid obstacles. The integrated vision-based system described in this study allows a mobile robot to avoid collisions, detect stationary obstacles with a monocular camera, and localize itself simultaneously. The robot self-localizes using a model-based method, and detects obstacles by calculating the difference between edges in the real camera image and edges estimated from a 3D environment model. Moving barriers are detected using ultrasonic sensors.

Experiments in a corridor setting showed the robot to be able to avoid fixed impediments such as wooden crates. The robot was unable to identify 50% of the brown boxes in comparison to the same size white boxes, indicating that obstacle detectability is dependent on visual contrast and size. The study also examines other methods for obstacle avoidance and navigation by mobile robots, such as deep learning object detection, path planning algorithms, and Kinect sensors. The reliability of depth sensing and object detection can be increased by combining different sensor modalities, such as LiDAR and stereo cameras. Subsequent research endeavours will centre around practical implementations and expanding the methodologies to intricate settings. This research has applications in the manufacturing, search and rescue, and exploration sectors and advances the field of mobile robot autonomy.

G-13 ep-13

Project Report
on

CANSAT
A CAN SIZED SATELLITE

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL ENGINEERING

by

MEDHAVI AGGARWAL(2000270210047)

KRIPANJAN YADAV(2000271530026)

Under the supervision
of

Mr. Neeraj Gupta

Assistant Professor

Department of Electrical and Electronics Engineering



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Year : 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
on

CANSAT
A CAN SIZED SATELLITE

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL ENGINEERING

by

MEDHAVI AGGARWAL(2000270210047)
KRIPANJAN YADAV(2000271530026)

Under the supervision
of

Mr. Neeraj Gupta
Assistant Professor
Department of Electrical and Electronics Engineering



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Year : 2023 – 2024

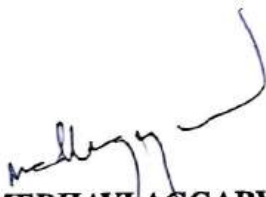

Director
Ajay Kumar Garg Engg. College
Ghaziabad



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled "CANSAT" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2023 to May, 2024 under the supervision of Mr. Neeraj Gupta, Assistant Professor, Department of Electrical Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.


MEDHAVI AGGARWAL
(2000270210047)

KRIPANJAN YADAV
(2000271530026)



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CERTIFICATE

This is to certify that the project report entitled “CANSAT” submitted to **Ajay Kumar Garg Engineering College, Ghaziabad**, in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in Electrical Engineering** of **Dr. A. P. J. Abdul Kalam Technical University, Lucknow**, is a bonafide record of work submitted by **Medhavi Aggarwal(200270210047)** and **Kripanjan Yadav (2000271530026)** under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

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Supervisor
Assistant Professor
Department of Electrical
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AKGEC, Ghaziabad

Dr. Lokesh Varshney
Prof & Head
Department of Electrical and
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AKGEC, Ghaziabad

ACKNOWLEDGEMENTS

We take this opportunity to express our deep sense of gratitude and regard to Mr. Neeraj Gupta, Asst. Prof. (EN Dept.), Ajay Kumar Garg Engineering College, Ghaziabad for his continuous encouragement and able guidance, we needed to complete this project.

We would pay our sincere gratitude to the Director of the college, Dr. Hemant Ahuja and the Head of the Dept. (EN), Dr. Lokesh Varshney for his precious and enlightening words of wisdom which motivated us throughout our project work.

We extend our heartfelt thanks to Dr Avdhesh Gupta, our professor in charge, for providing the necessary resources and support. His expertise and feed- back have been instrumental in shaping the direction and quality of this work.

We are also grateful to Mr Akhilesh Verma and Mr Ashish Dixit, whose teaching and mentorship have significantly contributed to my understanding and application of this report and project related principles. My sincere appreciation goes to my friends and family for their unwavering support and encouragement throughout this journey. Their understanding and patience have been a constant source of motivation

Lastly we would like to acknowledge the efforts and coordination of team members of TEAM DEBRIS that helped in successful completion of the project

G-14

Project Report
on

**DYNAMIC WIRELESS CHARGING OF FOUR-WHEELER
ELECTRIC VEHICLE**

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY
in

ELECTRICAL AND ELECTRONICS ENGINEERING
by

**ABHISHEK YADAV (2000270210006)
DEVANSHI SINGHAL (2000270210026)
HARSH PRAKASH TRIPATHI (2000270210037)
SUDHESH SRIVASTAVA (2000270210084)**

Under the supervision
of

**Dr. LOKESH VARSHNEY (HOD EN DEPARTMENT)
Mr. MAHENDRA DUTT DWIVEDI (ASST. PROFESSOR EN DEPARTMENT)**
Department of ELECTRICAL AND ELECTRONICS ENGINEERING



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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY, LUCKNOW

Year: 2023 - 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
on

DYNAMIC WIRELESS CHARGING OF FOUR-WHEELER ELECTRIC VEHICLE

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

**BACHELOR OF TECHNOLOGY
in**

**ELECTRICAL AND ELECTRONICS ENGINEERING
by**

**ABHISHEK YADAV (2000270210006)
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Under the supervision
of

**Dr. LOKESH VARSHNEY (HOD EN DEPARTMENT)
Mr. MAHENDRA DUTT DWIVEDI (ASST. PROFESSOR EN DEPARTMENT)**
Department of ELECTRICAL AND ELECTRONICS ENGINEERING



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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY, LUCKNOW

Year: 2023 – 2024


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Ghaziabad



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled “**DYNAMIC WIRELESS CHARGING OF FOUR - WHEELER ELECTRIC VEHICLE**” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical and Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2023 to May, 2024 under the supervision of **Dr. Lokesh Varshney**, EN, Department of Electrical and Electronics Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Abhishek

ABHISHEK YADAV
(2000270210006)

devanshi

DEVANSHI SINGHAL
(2000270210026)

Harsh

HARSH PRAKASH TRIPATHI
(2000270210037)

Sudhesh


SUDHESH SRIVASTAVA
(2000270210084)




AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CERTIFICATE

This is to certify that the project report entitled “DYNAMIC WIRELESS CHARGING OF ELECTRIC VEHICLE” submitted to **Ajay Kumar Garg Engineering College, Ghaziabad**, in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology** in **Electrical And Electronics** of **Dr. A. P. J. Abdul Kalam Technical University, Lucknow**, is bona fide record of work submitted by **Abhishek Yadav (2000270210006)**, **Devanshi Singhal (2000270210026)**, **Harsh Prakash Tripathi (2000270210037)** and **Sudhesh Srivastava (2000270210084)** under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.


Dr. Lokesh Varshney
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03/06/24
Mr. Mahendra Dutt Dwivedi
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Asst. Professor
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Director
Ajay Kumar Garg Engg. College
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ACKNOWLEDGEMENT

We take this opportunity to express our deep sense of gratitude and regard to **Dr. Lokesh Varshney (HoD EN Department, AKGEC)** and **Mr. Mahendra Dutt Dwivedi (Assistant Professor EN Department, AKGEC)**, of Ajay Kumar Garg Engineering College, Ghaziabad for their continuous encouragement and able guidance, we needed to complete this project. We would pay our sincere gratitude to **Prof. Ashiv Shah (HoD TIFAC)** for his precious and enlightening words of wisdom which motivated us throughout our project work.

Furthermore, we extend our heartfelt appreciation to the entire faculty of the EN Department at AKGEC for their unwavering support and valuable insights. Their dedication to fostering an environment conducive to learning and innovation has been instrumental in our academic journey.

We are also indebted to our peers and colleagues whose collaboration and constructive feedback have enriched our project. Their diverse perspectives and collective efforts have contributed significantly to the success of this endeavor.

Last but not least, we would like to thank our families and friends for their unwavering encouragement and understanding during the course of this project. Their love and support provided us with the strength and motivation to overcome challenges and strive for excellence.

In conclusion, we acknowledge with gratitude all those who have contributed directly or indirectly to the completion of this project. Your support has been invaluable, and we are truly grateful for the opportunity to have worked alongside such esteemed individuals and institutions.

G-16

Project Report
on
**AUTOMATIC STAMPING AND SORTING MACHINE USING PLC AND PNEUMATIC
SYSTEM**

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

In

ELECTRICAL AND ELECTRONICS ENGINEERING

By

**RITU BISHT (2000270210071)
PRERNA BALODI (2000270210063)
SHANTANU SHISHODIA (2000270210073)
SHASHANK RAWAT (2000270210074)**

Under the supervision
Of

**Mr. NEERAJ GUPTA
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**Mr. MAHENDRA DUTT DWIVEDI
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Project Report
on

**AUTOMATIC STAMPING AND SORTING MACHINE USING PLC AND PNEUMATIC
SYSTEM**

*Submitted in partial fulfillment of the
requirements for the award of the degree*

of

BACHELOR OF TECHNOLOGY

In

ELECTRICAL AND ELECTRONICS ENGINEERING

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Under the supervision

Of

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ASSISTANT PROFESSOR

Department of EN

&

Mr. MAHENDRA DUTT DWIVEDI

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Department of EN



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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year: 2023 – 2024


Director
Ajay Kumar Garg Engg. College
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AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABA

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled "AUTOMATIC STAMPING AND SORTING MACHINE USING PNEUMATIC SYSTEM" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical and Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2023 to May, 2024 under the supervision of Mr. Neeraj Gupta, Mr. Mahendra Dutt Dwivedi Assistant Professors in ELECTRICAL AND ELECTRONICS DEPARTMENT ,AKGEC. The information presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

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Ritu Bisht

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Name: Prerna Balodi

Prerna

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Name: Shantanu Shishodia

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AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CERTIFICATE

This is to certify that the project report entitled “AUTOMATIC STAMPING AND SORTING USING PNEUMATIC SYSTEM” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in ELECTRICAL AND ELECTRONICS ENGINEERING of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is bonafide record of work submitted by Ritu Bisht (2000270210071), Prerna Balodi (2000270210063), Shantanu Shishodia (2000270210073) and Shashank Rawat (2000270210074) under our supervision. The information presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Supervisor:



Mr. Neeraj Gupta
Assistant Professor
Department of EN
AKGEC, Ghaziabad



Dr. Lokesh Varshney
HOD EN Department
AKGEC, Ghaziabad

Co-Supervisor:



Mr. Mahendra Dutt Dwivedi
Assistant Professor
Department of EN
AKGEC, Ghaziabad

ACKNOWLEDGEMENT

We take this opportunity to express our deep sense of gratitude and regard to **THE HoD (ELECTRICAL AND ELECTRONICS DEPARTMENT) Mr. Lokesh Varshney and Mr. Neeraj Gupta (Assistant Professor Electrical and Electronics Department, AKGEC) and Mr. Mahendra Dutt Dwivedi (Assistant Professor Electrical and Electronics Department, AKGEC)**, of Ajay Kumar Garg Engineering College, Ghaziabad for their continuous encouragement and able guidance. We pay our sincere gratitude to all Professors for their precious and enlightening words of wisdom which motivated us throughout our project work and publication.

G-01

Project Report
on

Automated Greenhouse Monitoring System
*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY
in

ELECTRICAL & ELECTRONIC ENGINEERING

By

Yash Gautam (2000270210097)
Vansh Rastogi (2000270210092)
Vidhi Tripathi (2000270310182)
Tushar Sharma(2000270310175)

Under the supervision of

Ms. Deepti Singh
(Asst. Professor)

Department of Electronics and Communication

Mr. Mahesh Sharma
(Asst. Professor)

Department of Electrical and Electronics



AJAY KUMAR GARG ENGINEERING COLLEGE, GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad-201009
DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY, LUCKNOW

Year: 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
on
Automated Greenhouse Monitoring System

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL & ELECTRONIC ENGINEERING

By

Yash Gautam (2000270210097)

Vansh Rastogi (2000270210092)

Vidhi Tripathi (2000270310182)

Tushar Sharma(2000270310175)

Under the supervision of

Ms. Deepti Singh

(Asst. Professor)

Department of Electronics and Communication

Mr. Mahesh Sharma

(Asst. Professor)

Department of Electrical and Electronics



AJAY KUMAR GARG ENGINEERING COLLEGE, GHAZIABAD

27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY, LUCKNOW

Year: 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled "**Automated Greenhouse Monitoring System**" to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical and Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July 2023 to May 2024 under the supervision of **Ms. Deepti Singh**, Asst. Professor, Department of Electronics and Communication Engineering and **Mr. Mahesh Sharma**, Asst. Professor, Department of Electrical and Electronics Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

**YASH GAUTAM
(2000270210097)**

**VANSH RASTOGI
(2000270210092)**

**VIDHI TRIPATHI
(2000270310182)**

**TUSHAR SHARMA
(2000270310175)**

**Director
Ajay Kumar Garg Engg. College
Ghaziabad**



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CERTIFICATE

This is to certify that the Project report entitled “Automated Greenhouse Monitoring System” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical and Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is bona fide record of work submitted by Yash Gautam (2000270210097), Vansh Rastogi (2000270210092), Vidhi Tripathi (2000270310182), and Tushar Sharma (2000270310175) under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Ms. Deepti Singh
Supervisor
Asst. Professor
Department of Electronics and Communication
Engineering
Ajay Kumar Garg Engineering College
Ghaziabad

HOD EN
Dr. Lokesh Varshney
Ajay Kumar Garg Engineering
College, Ghaziabad

Mr. Mahesh Sharma
Co-Supervisor
Asst. Professor
Department of Electrical and Electronics
Engineering
Ajay Kumar Garg Engineering College
Ghaziabad

Director
Ajay Kumar Garg Engg. College
Ghaziabad

G-02

Project Report
on

Multi-Role UAV

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

SIDDHARTH KUMAR SINGH (2000270210080)

Under the supervision
of

Mr. DINANATH PRASAD

Assistant Professor
Department of Electrical and Electronics

Mr. VIKRAM SINGH RAJPUT

Assistant Professor
Department of Mechanical Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year: 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
on

Multi-Role UAV

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

SIDDHARTH KUMAR SINGH (2000270210080)

Under the supervision
of

Mr. DINANATH PRASAD

Assistant Professor
Department of Electrical and Electronics

Mr. VIKRAM SINGH RAJPUT

Assistant Professor
Department of Mechanical Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year: 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled "Multi-Role UAV" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical and Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2023 to May, 2024 under the supervision of **Mr. Dinanath Prasad**, Assistant Professor, Department of Electrical and Electronics Engineering and **Mr. Vikram Singh Rajput**, Assistant Professor, Department of Mechanical Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Siddharth Kumar Singh

SIDDHARTH KUMAR SINGH

(2000270210080)


[Signature]
Director
Ajay Kumar Garg Engg. College
Ghaziabad





**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CERTIFICATE

This is to certify that the project report entitled "Multi-Role UAV" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical and Electronics Engineering Dept. of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is bona fide record of work submitted by Siddharth Kumar Singh (2000270210080) under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.


Mr. Dinanath Prasad
Supervisor
Assistant Professor
Department of Electrical and Electronics
Engineering
AKGEC, Ghaziabad


Mr. Vikram Singh Rajput
Supervisor
Department of Mechanical
Engineering
AKGEC, Ghaziabad


Dr. Lokesh Varshney
Prof & Head
Department of Electrical and Electronics
Engineering
AKGEC, Ghaziabad


Director
Ajay Kumar Garg Engg. College
Ghaziabad

G-03

Project Report
on

CROP MONITORING SYSTEM USING NI LABVIEW

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

**ELECTRONICS AND COMMUNICATION ENGINEERING
& ELECTRICAL AND ELECTRONICS ENGINEERING**

by

**MANSI NIJHAWAN (2000270310094)
NITYA SINGH (2000270310105)
PRADHUMN SACHAN (2000270310110)
SAMEER CHHONKAR (2000270210072)**

Under the supervision of

Mrs. SUVARNA MUJUMDAR
(Asst. Professor, ECE Department)

&

Mr. MAHESH SHARMA
(Asst. Professor, EN Department)



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, Delhi-Meerut Expressway, P.O. Adhyatmik Nagar, Ghaziabad - 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year : 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
on

CROP MONITORING SYSTEM USING NI LABVIEW

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

**ELECTRONICS AND COMMUNICATION ENGINEERING
& ELECTRICAL AND ELECTRONICS ENGINEERING**

by

**MANSI NIJHAWAN (2000270310094)
NITYA SINGH (2000270310105)
PRADHUMN SACHAN (2000270310110)
SAMEER CHHONKAR (2000270210072)**

Under the supervision of

Mrs. SUVARNA MUJUMDAR
(Asst. Professor, ECE Department)

&

Mr. MAHESH SHARMA
(Asst. Professor, EN Department)



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year : 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled “**CROP MONITORING SYSTEM USING NI LABVIEW**” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electronics and Communication Engineering & Electrical and Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2023 to May, 2024 under the supervision of **Mrs. Suvarna Mujumdar**, Asst. Professor, Department of Electronics And Communication Engineering & **Mr. Mahesh Sharma**, Asst. Professor, Department of Electrical and Electronics Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of our knowledge.

MANSI NIJHAWAN
(2000270310094)

NITYA SINGH
(2000270310105)

PRADHUMN SACHAN
(2000270310110)

SAMEER CHHONKAR
(2000270210072)



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CERTIFICATE

This is to certify that the project report entitled “CROP MONITORING SYSTEM USING NI LABVIEW” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electronics and Communication Engineering & Electrical and Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is bona fide record of work submitted by Mansi Nijhawan (2000270310094), Nitya Singh (20002703100105), Pradhumn Sachan (2000270310110) and Sameer Chhonkar (2000270210072) under our supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Mrs. SUVARNA MUJUMDAR
Supervisor
Asst. Professor
ECE Department
AKGEC, Ghaziabad

Mr. MAHESH SHARMA
Supervisor
Asst. Professor
EN Department
AKGEC, Ghaziabad

Dr. LOKESH VARSHNEY
Prof & Head
Department of Electrical And Electronics Engineering
AKGEC, Ghaziabad

G-04

Final Year Project Report On
WIRELESS SPEED CONTROLLING OF ELECTRIC VEHICLE

*Submitted in partial fulfillment of the
requirements for the award of the
degree of*

BACHELOR OF TECHNOLOGY

in

Electrical & Electronics Engineering

by

MANISH JAISWAL (2000270210044)

RAJ SINGH (2000270210069)

SHIPRA YADAV (2000270210077)

TRIPTI TIWARI (2000270210089)

*Under the supervision
of*

Mr. GAURAV SRIVASTAVA (Asst. Prof, EN Department)

&

Mr. DINANATH PRASAD (Asst. Prof, EN Department)

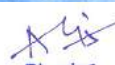


AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

17, K. M. Sane, NH 24, Delhi Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad - 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year: 2023 - 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Final Year Project Report On
WIRELESS SPEED CONTROLLING OF ELECTRIC VEHICLE

*Submitted in partial fulfillment of the
requirements for the award of the
degree of*

BACHELOR OF TECHNOLOGY

in

Electrical & Electronics Engineering

by

MANISH JAISWAL (2000270210044)

RAJ SINGH (2000270210069)

SHIPRA YADAV (2000270210077)

TRIPTI TIWARI (2000270210089)

Under the supervision
of

Mr. GAURAV SRIVASTAVA (Asst. Prof, EN Department)

&

Mr. DINANATH PRASAD (Asst. Prof, EN Department)



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

27th Km. Stone, NH 24, Delhi Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year: 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CANDIDATE'S DECLARATION

We hereby declare that the work being presented in the report entitled "WIRELESS SPEED CONTROLLING SYSTEM FOR ELECTRIC VEHICLE" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical & Electronics Engineering of Dr. A.P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July'2023 to May'2024 under the supervision of Mr. Gaurav Srivastava & Mr. Dinanath Prasad, Asst. Professor, Department of Electrical & Electronics Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

RAJ SINGH
(2000270210069)

TRIPTI TIWARI
(2000270210089)

SHIPRA YADAV
(2000270210077)

MANISH JAISWAL
(2000270210044)



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CERTIFICATE

This is to certify that the project report entitled “WIRELESS SPEED CONTROLLING SYSTEM FOR ELECTRIC VEHICLE” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical & Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is bonafide record of work submitted by Raj Singh(2000270210069), Tripti Tiwari(2000270210089), Shipra Yadav(2000270210077) and Manish Jaiswal(2000270210044) under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Mr. Gaurav Srivastava
Asst Prof
Department of Electrical & Electronics
Engineering
AKGEC, Ghaziabad

Mr. Dimanath Prasad
Asst Prof
Department of Electrical & Electronics
Engineering
AKGEC, Ghaziabad

Dr. Lokesh Varshney
HOD EN Department
AKGEC, Ghaziabad

G-05

Project Synopsis
On

HORIZONTAL FLOW WRAPPING MACHINE IN INDUSTRIAL AUTOMATION

*Submitted in partial fulfillment of the
requirements for the award of the degree*

of
BACHELOR OF TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

MOHIT KUMAR MAHESHWARI (2100270219005)

HARSH KUMAR PATHAK (2100270219004)

ANURAG KUMAR GUPTA (2100270219001)

AWAS BHARDWAJ (2100270219002)

Under the supervision of

Mr. MAHESH SHARMA

Assistant Professor

Department of Electrical & Electronics Engineering

Dr. NITISHA SHRIVASTAVA

Assistant Professor

Department of Electrical & Electronics Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

27th KM Milestone, Delhi - Meerut Expy, Ghaziabad, Uttar Pradesh 201015

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year : 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

**Project Synopsis
On**

**HORIZONTAL FLOW WRAPPING MACHINE IN INDUSTRIAL
AUTOMATION**

*Submitted in partial fulfillment of the
requirements for the award of the degree*

of
BACHELOR OF TECHNOLOGY
in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

**MOHIT KUMAR MAHESHWARI (2100270219005)
HARSH KUMAR PATHAK (2100270219004)
ANURAG KUMAR GUPTA (2100270219001)
AWAS BHARDWAJ (2100270219002)**

Under the supervision of

Mr. MAHESH SHARMA

Assistant Professor

Department of Electrical & Electronics Engineering

Dr. NITISHA SHRIVASTAVA

Assistant Professor

Department of Electrical & Electronics Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

27th KM Milestone, Delhi - Meerut Expy, Ghaziabad, Uttar Pradesh 201015

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year : 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CANDIDATE'S DECLARATION

We hereby declare that this submission is our work and that, to the best of our knowledge and belief, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma by the university or other institute of higher learning, except where due acknowledgment has been made in the text.

**MOHIT KUMAR MAHESHWARI
(2100270219005)**

**HARSH KUMAR PATHAK
(2100270219004)**

**ANURAG KUMAR GUPTA
(2100270219001)**

**AWAS BHARDAWJ
(2100270219002)**

**Director
Ajay Kumar Garg Engg. College
Ghaziabad**



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CERTIFICATE

This is to certify that the Project report entitled "**Horizontal Flow Wrapping Machine in Industrial Automation**" which is submitted by Student names **Mohit Kumar Maheshwari, Harsh Kumar Pathak, Anurag Kumar Gupta, Awas Bhardwaj** in the partial fulfillment of requirement for the award of degree of Bachelor of Technology (Electrical and Electronics Engineering) submitted to Dr. A.P.J. Abdul Kalam Technical University, Lucknow is a record of students' work carried out under my supervision. The matter in this report has not been submitted to any University or Institution for the award of any degree.

Mr. MAHESH SHARMA
Asst. Professor of
EN Department
AKGEC, Ghaziabad

Dr. Nitisha Shrivastava
Asst. Professor of
EN Department
AKGEC, Ghaziabad

Prof. Dr. Lokesh Varshney
HOD of EN Department
AKGEC, Ghaziabad

Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
On

SMART SOLAR TRACKER WITH SOLAR PANEL

*Submitted in partial fulfillment of the
requirements for the award of the degree of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

OSHO BHARDWAJ (2000270210055)

NITIN JHA (2000270210051)

PRATEEK SINGH (2000270210060)

SHEKHAR TRIPATHI (2000270210075)

RAHUL PRAKASH (1900270210075)

Under the supervision of

Mr. FARVEEN DHULL

Asst. Professor of
EE Department

Mr. RITESH SHARMA

Asst. Professor of
EE Department



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

Plot No. 10, Sector 10, Delhi-Noida Bypass Road, Adhvaatik Nagar, Ghaziabad - 201001

UPWARD KANPUR, KALAM TECHNICAL UNIVERSITY LUCKNOW

Year : 2023 - 2024

AKG

Director

**Ajay Kumar Garg Engg. College
Ghaziabad**



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CANDIDATE'S DECLARATION

We hereby declare that this submission is our own work and that, to the best of our knowledge and belief, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma by the university or other institute of higher learning, except where due acknowledgement has been made in the text.

OsHo Bhardwaj

OSHO BHARDWAJ
(2000270210053)

Nitin Jha

NITIN JHA
(2000270210051)

Prateek Singh

PRATEEK SINGH
(2000270210060)

Shekhar Tripathi

SHEKHAR TRIPATHI
(2000270210075)

Rahul Prakash

RAHUL PRAKASH
(1900270210075)

A. K. G.


Director
Ajay Kumar Garg Engg. College
Ghaziabad




**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

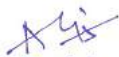
CERTIFICATE

This is to certify that Project Report entitled "SMART SOLAR TRACKER WITH SOLAR TREE" which is submitted by Osho Bhardwaj, Nitin Jha, Prateek Singh, Shekhar Tripathi and Rahul Prakash in the partial fulfillment of requirement for the award of degree of Bachelor of Technology (Electrical and Electronics Engineering) submitted to Dr. A.P.J. Abdul Kalam Technical University, Lucknow is a record of students' own work carried out under my supervision. The matter in this report has not been submitted to any University or Institution for award of any degree.


Mr. PARVEEN DHULL
Asst. Professor of
EN Department
AKGEC, Ghaziabad


Dr. LOKESH VARSHNEY
HOD of
EN Department
AKGEC, Ghaziabad


Mr. RITESH SHARMA
Asst. Professor of
EN Department
AKGEC, Ghaziabad


Director
Ajay Kumar Garg Engg. College
Ghaziabad

9-8
Project Report
on

**48V TWO-WHEELER ELECTRIC VEHICLE CHARGER
INTEGRATED WITH SMART CABLE MANAGEMENT
SYSTEM**

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

**Bachelor of Technology
in**

ELECTRICAL AND ELECTRONICS ENGINEERING

by

**AMAN MALIK (2000270210011)
ABHISHEK SINGH (2000270210005)
GARGI GUPTA (2000270210033)
ANSHUL BHARDWAJ (2000270210014)**

**Under the Supervision
of**

**Mr. ARUN KUMAR MAURYA
(Assistant Professor)**

**Department of Electrical and Electronics Engineering
Dr. J.G. YADAV
(Associate Professor)**

Department of Electrical and Electronics Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
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DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW
Year: 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
on

48V TWO-WHEELER ELECTRIC VEHICLE CHARGER INTEGRATED WITH SMART CABLE MANAGEMENT SYSTEM

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

Bachelor of Technology

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

AMAN MALIK (2000270210011)

ABHISHEK SINGH (2000270210005)

GARGI GUPTA (2000270210033)

ANSHUL BHARDWAJ (2000270210014)

Under the Supervision

of

Mr. ARUN KUMAR MAURYA

(Assistant Professor)

Department of Electrical and Electronics Engineering

Dr. J.G. YADAV

(Associate Professor)

Department of Electrical and Electronics Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year : 2023-2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled "48V TWO-WHEELER ELECTRIC VEHICLE CHARGER INTEGRATED WITH SMART CABLE MANAGEMENT SYSTEM" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical and electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from September 2023 to June 2024 under the supervision of **Mr. ARUN KUMAR MAURYA** Assistant Professor, Department of Electrical and Electronics Engineering, **Dr. J.G. YADAV** Associate Professor, Department of Electrical and Electronics Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

AMAN MALIK (2000270210011)

Aman

ABHISHEK SINGH (2000270210005)

Abhishek

GARGI GUPTA (2000270210033)

Gargi

ANSHUL BHARDWAJ (2000270210014)

Anshul

AKG
Director
Ajay Kumar Garg Engg. College
Ghaziabad



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CERTIFICATE

This is to certify that the project report entitled “48V TWO-WHEELER ELECTRIC VEHICLE CHARGER INTEGRATED WITH SMART CABLE MANAGEMENT SYSTEM” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in Electrical and Electronics Engineering** of **Dr . A. P. J. Abdul Kalam Technical University, Lucknow**, is bona fide record of work submitted by Aman Malik (2000270210011), Abhishek Singh (2000270210005), Gargi Gupta (2000270210033), Anshul Bhardwaj (2000270210014) under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Mr. Arun Kumar Maurya

Assistant Professor

Department of EN

AKGEC Ghaziabad

Dr. J.G. Yadav

Associate Professor

Department of EN

AKGEC, Ghaziabad

Director

**Ajay Kumar Garg Engg. College
Ghaziabad**

9-10

Project Report
on

DENSITY BASED TRAFFIC MANAGEMENT SYSTEM USING PLC AND HMI

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

Ayushi Singh (2000270210024) EN
Aman Prakash Verma (2000270210012) EN
Aditya Kumar Verma (2000270210008) EN
Mansi Jaiswal (2000270210045) EN

Under the supervision
of

Mr. Mahendra Dutt Dwivedi (Asst. Professor)
Department of Electrical and Electronics Engineering
Dr. Alok Vardhan (Asst. Professor)
Department of Mechanical Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone No. 24, Delhi-Hapur Bypass Road, Adiyatmik Nagar, Ghaziabad- 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW
Year : 2023 - 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
on

DENSITY BASED TRAFFIC MANAGEMENT SYSTEM USING PLC AND HMI

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

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Under the supervision
of

Mr. Mahendra Dutt Dwivedi (Asst. Professor)
Department of Electrical and Electronics Engineering
Dr. Alok Vardhan (Asst. Professor)
Department of Mechanical Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW
Year : 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

G-10

Project Report
on
**DENSITY BASED TRAFFIC MANAGEMENT SYSTEM
USING PLC AND HMI**

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

Ayushi Singh (2000270210024) EN
Aman Prakash Verma (2000270210012) EN
Aditya Kumar Verma (2000270210008) EN
Mansi Jaiswal (2000270210045) EN

Under the supervision
of

Mr. Mahendra Dutt Dwivedi (Asst. Professor)
Department of Electrical and Electronics Engineering
Dr. Alok Vardhan (Asst. Professor)
Department of Mechanical Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone No. 11-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW
Year : 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
on

DENSITY BASED TRAFFIC MANAGEMENT SYSTEM USING PLC AND HMI

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

by

Ayushi Singh (2000270210024) EN
Aman Prakash Verma (2000270210012) EN
Aditya Kumar Verma (2000270210008) EN
Mansi Jaiswal (2000270210045) EN

Under the supervision
of

Mr. Mahendra Dutt Dwivedi (Asst. Professor)
Department of Electrical and Electronics Engineering
Dr. Alok Vardhan (Asst. Professor)
Department of Mechanical Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year : 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled "**Density Based Traffic Control System using PLC and HMI**" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical & Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2022 to May, 2023 under the supervision of **Mr. Mahendra Dutt Dwivedi**, Assistant professor, Department of Electrical & Electronics Engineering & **Dr. Alok Vardhan**, Assistant Professor, Department of Mechanical Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

AYUSHI SINGH

(2000270210024)

Ayushi Singh

ADITYA KUMAR VERMA

(2000270210008)

Aditya Verma

AMAN PRAKASH VERMA

(2000270210012)

Aman Prakash Verma

MANSI JAISWAL

(2000270210045)

Mansi Jaiswal



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CERTIFICATE

This is to certify that the project report entitled “Density Based Traffic Control System using PLC and HMI” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in Electrical & Electronics Engineering** of **Dr. A. P. J. Abdul Kalam Technical University, Lucknow**, is bona fide record of work submitted by Aman Prakash Verma (2000270210012), Ayushi Singh (2000270210024), Aditya Kumar Verma (2000270210008) And Mansi Jaiswal (2000270210045) under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.



03/06/24

Mr. MAHENDRA DUTT DWIVEDI
Supervisor
Assistant Professor
Department of Electrical & Electronics Engineering
AKGEC, Ghaziabad



Dr. LOKESH VARSHNEY
HOD Department of Electrical &
Electronics Engineering
AKGEC, Ghaziabad



03/06/24

Dr. ALOK VARDHAN
Co-Supervisor
Assistant Professor
Department of Mechanical Engineering
AKGEC, Ghaziabad



Director
Ajay Kumar Garg Engg. College
Ghaziabad

G-11

SMART IRRIGATION SYSTEM USING MCU AND MACHINE LEARNING

Project submitted in partial fulfillment of the Requirements for the Degree of

BACHELOR OF TECHNOLOGY

IN

ELECTRICAL AND ELECTRONICS ENGINEERING

By

Aashutosh Mishra (2000270210001)
Mohammad Kasim (2000270210048)
Akash Singh (2000270210009)
Akhand Pratap Singh (2000270210010)

UNDER THE GUIDANCE OF
Dr. A.K. Rai (Professor)
Mr. Neeraj Gupta (Asst. Professor)



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009
DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year : 2023 - 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

SMART IRRIGATION SYSTEM USING MCU AND MACHINE LEARNING

*Project submitted in partial fulfillment of the
Requirements for the Degree of*

BACHELOR OF TECHNOLOGY

IN

ELECTRICAL AND ELECTRONICS ENGINEERING

By

**Aashutosh Mishra (2000270210001)
Mohammad Kasim (2000270210048)
Akash Singh (2000270210009)
Akhand Pratap Singh (2000270210010)**

**UNDER THE GUIDANCE OF
Dr. A.K. Rai (Professor)
Mr. Neeraj Gupta (Asst. Professor)**



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009
DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year : 2023 - 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled “**Smart Irrigation system using MCU and Machine learning**” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Mechanical Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2024 to May, 2024 under the supervision of **Dr. A.K. Rai and Mr. Neeraj Gupta**, Department of Electrical And electronics Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Aashutosh Mishra
(2000270210001)

Mohammad Kasim
(2000270210048)

Akash Singh
(2000270210009)

Akhand Pratap Singh
(2000270210010)



Director
Ajay Kumar Garg Engg. College
Ghaziabad




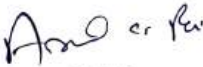
AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CERTIFICATE

This is to certify that the project report entitled "Smart Irrigation system Using MCU and Machine Learning" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical And Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is bona fide record of work submitted by Aashutosh Mishra (2000270210001), Mohammad Kasim (2000270210048), Akash Singh (2000270210009) and Akhand Pratap Singh (2000270210010) under our supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.


Mr. Neeraj Gupta
Asst Professor
Department of Electrical
& Electronics Engineering
AKGEC, Ghaziabad


Dr. Lokesh Varshney
HOD
Department of
Electrical & Electronics Engineering
AKGEC, Ghaziabad


Dr. A.K. Rai
Professor
Department of Electrical
& Electronics Engineering
AKGEC, Ghaziabad


Director
Ajay Kumar Garg Engg. College
Ghaziabad

9-17 10-12

IOT BASED ENERGY THEFT ALERT DETECTION SYSTEM

A Major Project Report

Submitted

in Partial Fulfilment of the Requirements for the Degree of

BACHELOR OF TECHNOLOGY

In

Electrical and Electronics Engineering

Submitted by

PRANJUL SINGH	2000270210058
SRIJAN	2000270210082
SUDHEER MAHOR	2000270210083
TUSHAR GUPTA	2000270210090

Under the Supervision of

Mr. Gaurav Srivastava

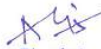
(As : Professor EN Department)



**Ajay Kumar Garg Engineering College, Ghaziabad 27th Km Stone, Delhi
Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad-201009**

DR. APJ ABDUL KALAM TECHNICAL UNIVERSITY

2023-24


Director
Ajay Kumar Garg Engg. College
Ghaziabad

IOT BASED ENERGY THEFT ALERT DET

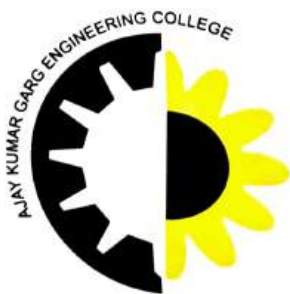
**A Major Project Report
Submitted
in Partial Fulfilment of the Requirements for the Degree of**

**BACHELOR OF TECHNOLOGY
In
Electrical and Electronics Engineering**

Submitted by

PRANJUL SINGH	2000270210058
SRIJAN	2000270210082
SUDHEER MAHOR	2000270210083
TUSHAR GUPTA	2000270210090

**Under the Supervision of
Mr. Gaurav Srivastava
(Asst. Professor EN Department)**



**Ajay Kumar Garg Engineering College, Ghaziabad 27th Km Stone, Delhi
- Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad-201009**

**DR. APJ ABDUL KALAM TECHNICAL UNIVERSITY
2023-24**


**Director
Ajay Kumar Garg Engg. College
Ghaziabad**

DECLARATION

We hereby declare that the work being presented in the report entitled "IOT BASED ENERGY THEFT ALERT DETECTION SYSTEM" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical and Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2023 to May, 2024 under the supervision of " Mr. Gaurav Srivastava (Asst. Professor EN Department)". The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Pranjul Singh

PRANJUL SINGH
2000270210058

Srijan

SRIJAN
2000270210082

Sudheer Mahor

SUDHEER MAHOR
2000270210083

Tushar Gupta

TUSHAR GUPTA
2000270210090

A. K. G.
Director
Ajay Kumar Garg Engg. College
Ghaziabad

CERTIFICATE

This is to certify that the project report entitled “**IOT BASED ENERGY THEFT ALERT DETECTION SYSTEM**” submitted to **Ajay Kumar Garg Engineering College, Ghaziabad**, in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in Electrical And Electronics Engineering** of **Dr. A. P. J. Abdul Kalam Technical University, Lucknow**, is bona fide record of work submitted by Pranjul singh (2000270210058), , Sudheer Mahor (2000270210082) , Srijan(2000270210083) and Tushar Gupta (2000270210090) under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Supervisor:-



Mr. Gaurav Srivastava

Asst. Professor EN Department.

AKGEC, Ghaziabad

HOD & Prof :-



Dr Lokesh Varshney

Electrical and Electronics Department

AKGEC, Ghaziabad

6-18

Air Purifier Automated Rover and pollution monitoring system

Project submitted in partial fulfillment of the Requirements for the Degree of

BACHELOR OF TECHNOLOGY

IN

ELECTRICAL AND ELECTRONICS ENGINEERING

By

- Asim Ehtasham (2000270210019)**
- Priyanshu Singh (2000270210065)**
- Abhinav Bansal (2000270210002)**
- Rajat Sharma (2000270210070)**

UNDER THE GUIDANCE OF

- Mr. Arun Kumar Maurya (Asst. Professor)**
- Mr. Ravinder Kumar (Professor)**



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009
DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Air Purifier Automated Monitoring system

*Project submitted in partial fulfillment of the
Requirements for the Degree of*

BACHELOR OF TECHNOLOGY

IN

ELECTRICAL AND ELECTRONICS ENGINEERING

By

**Asim Ehtasham(2000270210019)
Priyanshu Singh (2000270210065)
Abhinav Bansal (2000270210002)
Rajat Sharma (2000270210070)**

UNDER THE GUIDANCE OF

**Mr. Arun Kumar Maurya(Asst. Professor)
Mr. Ravinder Kumar(Professor)**



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009
DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW


Director
Ajay Kumar Garg Engg. College
Ghaziabad



CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled "**Air Purifier Automated cover and pollution monitoring system**" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical & Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2024 to May, 2024 under the supervision of **Mr. Arun Kumar Maurya and Mr. Ravinder Kumar**, Department of Electrical And electronics Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

Asim Ehtasham(2000270210019)

Priyanshu Singh(2000270210065)

Abhinav Bansal(2000270210002)

Rajat Sharma(2000270210070)



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CERTIFICATE

It is to certify that the project report entitled "Air Purifier Automated Rover and pollution monitoring system" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical And Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is bona fide record of work submitted by Asim Ehtasham (2000270210019), Abhina Bansal (2000270210002), Priyanshu Singh (2000270210065) And Rajat sharma (2000270210070) under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.


05/06/2011

Dr. Arun Kumar Maurya
Assistant Professor,
Department of Electrical
And Electronics Engineering
AKGEC, Ghaziabad



Mr. Ravinder Kumar
Professor (Assistant)
Department of Electrical
And Electronics Engineering
AKGEC, Ghaziabad

Dr. Lokesh Varshney
Professor and HOD
EN Dept AKGEC
Ghaziabad

6-19

Project Report
On

CATTLE HEALTH MONITORING SYSTEM

*Submitted in partial fulfilment of the
requirements for the award of the degree*

of

BACHELOR OF TECHNOLOGY

in

**ELECTRICAL AND ELECTRONICS ENGINEERING &
ELECTRONICS AND COMMUNICATION ENGINEERING**

By

ANUP KASHYAP (2000270210016)

KOMAL SHARMA (2000270310089)

FAIZIYA AKHTAR (2000270310069)

Under the supervision
of

Mr. Dinanath Prasad (Asst. Professor EN Department)

And

Mrs. Suvarna Mujumdar (Asst. Professor ECE Department)



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

27th Km Stone, NH-24, Delhi-Hapur Bypass Road, Aamnatmik Nagar, Ghaziabad - 201007

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

YEAR: 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad

Project Report
On

CATTLE HEALTH MONITORING SYSTEM

*Submitted in partial fulfilment of the
requirements for the award of the degree
of*

BACHELOR OF TECHNOLOGY

in

**ELECTRICAL AND ELECTRONICS ENGINEERING &
ELECTRONICS AND COMMUNICATION ENGINEERING**

By

**ANUP KASHYAP (2000270210016)
KOMAL SHARMA (2000270310089)
FAIZIYA AKHTAR (2000270310069)**

Under the supervision
of

Mr. Dinanath Prasad (Asst. Professor EN Department)

And

Mrs. Suvarna Mujumdar (Asst. Professor ECE Department)



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

YEAR: 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



AJAY KUMAR GARG ENGINEERING COLLEGE

GHAZIABAD

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled “ CATTLE HEALTH MONITORING SYSTEM” submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfilment of the requirements for the award of the degree of Bachelor of Technology in Electrical And Electronics Engineering Department of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from September, 2023 to May, 2024 under the supervision of **Mr. Dinanath Prasad** (Asst. Pro EN Dept.) and **Mrs. Suvarna Mujumdar** (Asst. Pro ECE Dept.) . The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.


ANUP KASHYAP (2000270210016)


KOMAL SHARMA (2000270310089)


FAIZAL AKHTAR (2000270310069)



**AJAY KUMAR GARG ENGINEERING COLLEGE
GHAZIABAD**

CERTIFICATE

This is to certify that the project report entitled “**CATTLE HEALTH MONITORING SYSTEM**” submitted to **Ajay Kumar Garg Engineering College, Ghaziabad**, in partial fulfilment of the requirements for the award of the degree of **Bachelor of Technology in Electrical and Electronics & Electronics and Communication Engineering** of **Dr. A. P. J. Abdul Kalam Technical University, Lucknow**, is bona fide record of work submitted by Anup Kashyap (2000270210016) , Komal Sharma (2000270310089) and Faiziya Akhtar (2000270310069) under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

MR. DINANATH PRASAD
Supervisor
Designation: Assistant Professor
Department of Electrical and Electronics
AKGEC Ghaziabad.

PROF. LOKESH VARSHNEY
Head of Department
Electrical and Electronics
AKGEC, Ghaziabad

MRS. SUVARNA MUJUMDAR
Supervisor
Designation: Assistant Professor
Department of Electronics and Communication
AKGEC, Ghaziabad

ACKNOWLEDGEMENT

We take this opportunity to express our deep sense of gratitude and regard to **Mr. Dinanath Prasad (Asst. Professor, EN Department)** and **Mrs. Suvarna Mujumdar (Asst. Professor, ECE Department)** and **Ajay Kumar Garg Engineering College, Ghaziabad** for his/her continuous encouragement and able guidance, we needed to complete this project. We would pay our sincere gratitude to **Prof. LOKESH VARSHNEY** for his precious and enlightening words of wisdom which motivated us throughout our project work.

We also wish to thank all the faculty members and staff of the EN and ECE departments for their support and assistance. Lastly, we express our deepest appreciation to our family and friends for their understanding, patience, and encouragement throughout the duration of our project.

6-20/20-20

COST EFFECTIVE DESIGN OF ELECTRICAL CIRCUIT

*Submitted in partial fulfillment of the
requirements for the award of the degree*

BACHELOR OF TECHNOLOGY

in

ELECTRICAL & ELECTRONICS ENGINEERING

by

- KULDEEP SAHU (2000270210043)**
- HIMANSHU CHAUDHARY (2000270210040)**
- YAIBHAV MISHRA (2000270210097)**
- MAYANK DUBEY (2000270210046)**

Under the supervision

of

Dr. VANI BHARGAVA

Associate Professor

Department of Electrical & Electronics Engineering

Ms. NAVJYOTI SHARMA

Assistant Professor

Department of Electrical & Electronics Engineering



AKGEC

AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad - 201009

DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year: 2023 - 2024

(Signature)
 Director
 Ajay Kumar Garg Engg. College
 Ghaziabad

Project Report
on
COST EFFECTIVE IOT BASED
Submitted in partial fulfillment of the
requirements for the award of the degree
of
BACHELOR OF TECHNOLOGY
in

ELECTRICAL & ELECTRONICS ENGINEERING

by

KULDEEP SAHU (2000270210043)
HIMANSHU CHAUDHARY (2000270210040)
VAIBHAV MISHRA (2000270210091)
MAYANK DUBEY (2000270210046)

Under the supervision
of

Dr. VANI BHARGAVA

Associate Professor

Department of Electrical & Electronics Engineering

Ms. NAVJYOTI SHARMA

Assistant Professor

Department of Electrical & Electronics Engineering



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD
27th Km. Stone, NH-24, Delhi-Hapur Bypass Road, Adhyatmik Nagar, Ghaziabad- 201009
DR. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Year: 2023 – 2024


Director
Ajay Kumar Garg Engg. College
Ghaziabad



AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CANDIDATES' DECLARATION

We hereby declare that the work being presented in the report entitled "COST EFFECTIVE IOT BASED SMART HELMET" submitted to Ajay Kumar Garg Engineering College, Ghaziabad, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Electrical & Electronics Engineering of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, is an authentic record of our own work carried out during a period from July, 2023 to May, 2024 under the supervision of **Dr. Vani Bhargava**, Associate Professor, Department of Electrical & Electronics Engineering and **Ms. Navjyoti Sharma**, Assistant professor, Department of Electrical & Electronics Engineering. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.

KULDEEP SAHU
(2000270210043)

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AJAY KUMAR GARG ENGINEERING COLLEGE GHAZIABAD

CERTIFICATE

This is to certify that the project report entitled “**COST EFFECTIVE IOT BASED SMART HELMET**” submitted to **Ajay Kumar Garg Engineering College, Ghaziabad**, in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in Electrical & Electronics Engineering** of **Dr. A. P. J. Abdul Kalam Technical University, Lucknow**, is bona fide record of work submitted by **Kuldeep Sahu (2000270210043)**, **Vaibhav Mishra (2000270210091)**, **Himanshu Chaudhary (2000270210040)** and **Mayank Dubey (2000270210046)** under my supervision. The matter presented in this report has not been submitted to any other university or institution for the award of any degree to the best of my knowledge.


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Lastly, I would like to thank my family and friends for their unwavering support and encouragement throughout this endeavor.

6-21

Project Report

on

SMART SHOPPING CART

Submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

ELECTRICAL & ELECTRONICS ENGINEERING

by

DIVYANSHI CHAUDHARY (2000270210031)

SHUBH MAHAJAN (2000270210078)

DIVYAKSH (2000270210030)

YASH PRATAP (2000270210099)

SYED SHAMAIL ALI (2000270210087)

Under the supervision of

Mr. Arun Kumar Maurya

Assistant Professor

Department of Electrical & Electronics Engineering

Dr. Nitisha Shrivastava

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DR. A. P. J. ABU KALAM TECHNICAL UNIVERSITY LUCKNOW

Year: 2023 - 2024


Director
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Project Report
on
SMART SHOPPING
*Submitted in partial fulfillment of the requirements
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GHAZIABAD**



DECLARATION

We hereby declare that this submission is our own work and that, to the best of our knowledge and belief, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma by the university or other institute of higher learning, except where due acknowledgement has been made in the text.

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CERTIFICATE

This is to certify that Project Report entitled "SMART SHOPPING CART" which is submitted by Divyanshi
Sudhary, Divyaksh, Shubh Mahajan, Yash Partap, Syed Shamil Ali in the partial fulfillment of requirement
for the award of degree of Bachelor of Technology (Electrical and Electronics Engineering) submitted to Dr. A.P.J.
Abdul Kalam Technical University, Lucknow is a record of students' own work carried out under my supervision.
The matter in this report has not been submitted to any University or Institution for award of any degree.

SUPERVISOR :

1. Prof. Arun Kumar Maurya
Department

DATE: Dr. Lokesh Sir

DATE: 17-05-2024


Director
Ajay Kumar Garg Engg. College
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