



1.3 Curriculum Enrichment

1.3.2. Average percentage of courses that include experiential learning through project work/field work/internship during last five years

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Department of Civil Engineering
Project (2019-23 A Batch)

Sl.No	Group No	Name of Student	Topic	Project Guide
1	1	Aiswarya Raju	Effect Of Addition Of Ggbs In Cement Treated Sub Base (In Association With Nh66 Six Lane Extension Project, Under Nhai)	Ms. Amrutha S
2	1	Ben Varghese Paul	Effect Of Addition Of Ggbs In Cement Treated Sub Base (In Association With Nh66 Six Lane Extension Project, Under Nhai)	Ms. Amrutha S
3	1	Gouri Priya N Nair	Effect Of Addition Of Ggbs In Cement Treated Sub Base (In Association With Nh66 Six Lane Extension Project, Under Nhai)	Ms. Amrutha S
4	1	Lisha C	Effect Of Addition Of Ggbs In Cement Treated Sub Base (In Association With Nh66 Six Lane Extension Project, Under Nhai)	Ms. Amrutha S
5	2	Alan Sunny	Partial Replacement Of Cement In Concrete By A Combination Of Waste Paper Pulp Ash And Fly Ash	Mrs. Bijimol Joseph
6	2	Gokul Vikram	Partial Replacement Of Cement In Concrete By A Combination Of Waste Paper Pulp Ash And Fly Ash	Mrs. Bijimol Joseph
7	2	Gokulnath M	Partial Replacement Of Cement In Concrete By A Combination Of Waste Paper Pulp Ash And Fly Ash	Mrs. Bijimol Joseph
8	2	Harikrishnan T P	Partial Replacement Of Cement In Concrete By A Combination Of Waste Paper Pulp Ash And Fly Ash	Mrs. Bijimol Joseph
9	3	Albert Sebastian	Partial Replacement Of Stirrups With Geogrid On Reinforced Concrete Beam	Ms. Neena M Joseph
10	3	Dawn Mathew Vince	Partial Replacement Of Stirrups With Geogrid On Reinforced Concrete Beam	Ms. Neena M Joseph
11	3	Jibin Johnson	Partial Replacement Of Stirrups With Geogrid On Reinforced Concrete Beam	Ms. Neena M Joseph
12	3	Sanju George Kurien	Partial Replacement Of Stirrups With Geogrid On Reinforced Concrete Beam	Ms. Neena M Joseph
13	4	Anitha Benny	Sawdust Ash As Partial Replacement Of Soil In M Brick	Mrs. Tina Jose
14	4	Anitta Joseph	Sawdust Ash As Partial Replacement Of Soil In M Brick	Mrs. Tina Jose
15	4	Sherin George	Sawdust Ash As Partial Replacement Of Soil In M Brick	Mrs. Tina Jose



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Sl.No	Group No	Name of Student	Topic	Project Guide
16	4	Sivapriya S Nair	Sawdust Ash As Partial Replacement Of Soil In M Brick	Mrs. Tina Jose
17	5	Arun Rajan	Advanced Piling Methods Incorporating Fly Ash To Improve Drilling Fluid Properties	Ms. Amrutha S
18	5	Anjana Biju	Advanced Piling Methods Incorporating Fly Ash To Improve Drilling Fluid Properties	Ms. Amrutha S
19	5	Hansa Noushad	Advanced Piling Methods Incorporating Fly Ash To Improve Drilling Fluid Properties	Ms. Amrutha S
20	5	Jobin Wilson	Advanced Piling Methods Incorporating Fly Ash To Improve Drilling Fluid Properties	Ms. Amrutha S
21	6	Dheeraj Raju	Comparative Study On Utilization Of Plastic Waste And Cigarette Butts In Bituminous Mixes	Ms. Soumya Rani P Thomas
22	6	Parvathi Suresh	Comparative Study On Utilization Of Plastic Waste And Cigarette Butts In Bituminous Mixes	Ms. Soumya Rani P Thomas
23	6	Sethulaksmi P. H	Comparative Study On Utilization Of Plastic Waste And Cigarette Butts In Bituminous Mixes	Ms. Soumya Rani P Thomas
24	6	Sona Mariyam Sunny	Comparative Study On Utilization Of Plastic Waste And Cigarette Butts In Bituminous Mixes	Ms. Soumya Rani P Thomas
25	7	E.Geevarghese	Design And Cost Analysis Of Drainage At Alappuzha (Nh-66)	Ms. Neena M Joseph
26	7	George M Jose	Design And Cost Analysis Of Drainage At Alappuzha (Nh-66)	Ms. Neena M Joseph
27	7	Muhammed Ansil Rezvi	Design And Cost Analysis Of Drainage At Alappuzha (Nh-66)	Ms. Neena M Joseph
28	7	Vysakh As	Design And Cost Analysis Of Drainage At Alappuzha (Nh-66)	Ms. Neena M Joseph
29	8	Feba Biju	Stabilisation Of Geogrid Using Different Types Of Geogrids	Ms. Meril Jose
30	8	Janet James	Stabilisation Of Geogrid Using Different Types Of Geogrids	Ms. Meril Jose
31	8	Joyel Raju Kanneth	Stabilisation Of Geogrid Using Different Types Of Geogrids	Ms. Meril Jose
32	8	Rizwana Salam	Stabilisation Of Geogrid Using Different Types Of Geogrids	Ms. Meril Jose
33	9	Haripriya Biju	Design And Analysis Of An Administrative Building Using Etabs	Mr. Appu John



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Sl.No	Group No	Name of Student	Topic	Project Guide
34	9	Jeevan James	Design And Analysis Of Administrative Building Using Etabs	Mr. Appu John
35	9	Navaneetha S	Design And Analysis Of Administrative Building Using Etabs	Mr. Appu John
36	9	Robin Thomas	Design And Analysis Of Administrative Building Using Etabs	Mr. Appu John
37	10	Abdul Azeez P Y	Stabilization Of Black Cotton Soil Using Bottom Ash And Cinder Stone Dust	Dr. Anoop C K
38	10	Athul Joby	Stabilization Of Black Cotton Soil Using Bottom Ash And Cinder Stone Dust	Dr. Anoop C K
39	10	Eldho Babu	Stabilization Of Black Cotton Soil Using Bottom Ash And Cinder Stone Dust	Dr. Anoop C K
40	10	Sanju Biju	Stabilization Of Black Cotton Soil Using Bottom Ash And Cinder Stone Dust	Dr. Anoop C K



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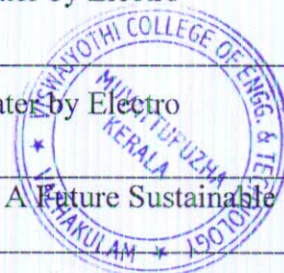
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Department of Civil Engineering Project (2019-23 B Batch)

Sl. No.	Group No	Name	Topic	Project Guide
1	1	Akhilamol Sibi	Bendable Concrete:Engineered Cementitious Composite	Mrs. Bijimol Joseph
2	1	B Ganeshraj	Bendable Concrete:Engineered Cementitious Composite	Mrs. Bijimol Joseph
3	1	Doni Biju	Bendable Concrete:Engineered Cementitious Composite	Mrs. Bijimol Joseph
4	1	Radhika Ratheesh	Bendable Concrete:Engineered Cementitious Composite	Mrs. Bijimol Joseph
5	2	Amal Koshi George	Torsional Resistance of polypropylene fibre reinforced concrete beams.	Mrs. Tina Jose
6	2	Sarath Mohanan	Torsional Resistance of polypropylene fibre reinforced concrete beams.	Mrs. Tina Jose
7	2	Shone Shaju	Torsional Resistance of polypropylene fibre reinforced concrete beams.	Mrs. Tina Jose
8	2	Varun Jaocb	Torsional Resistance of polypropylene fibre reinforced concrete beams.	Mrs. Tina Jose
9	3	Amal Reji	Planning Analysis and Design of a school building	Ms. Meril Jose
10	3	Dona Jose	Planning Analysis and Design of a school building	Ms. Meril Jose
11	3	Devadath Mohan	Planning Analysis and Design of a school building	Ms. Meril Jose
12	3	Jesmin Joseph	Planning Analysis and Design of a school building	Ms. Meril Jose
13	4	Rose Maria Vincent	Treatment of Hospital wastewater by Electro coagulation Techniques	Mr. Lins Paul Kuriakose
14	4	Roshna Liss Mathew	Treatment of Hospital wastewater by Electro coagulation Techniques	Mr. Lins Paul Kuriakose
15	4	Stephen Santhosh	Treatment of Hospital wastewater by Electro coagulation Techniques	Mr. Lins Paul Kuriakose
16	4	Muhammed Jefin	Treatment of Hospital wastewater by Electro coagulation Techniques	Mr. Lins Paul Kuriakose
17	5	Anirudh Manoj	Mycelium Building Baterials - A Future Sustainable Construction Material	Mrs. Finu John





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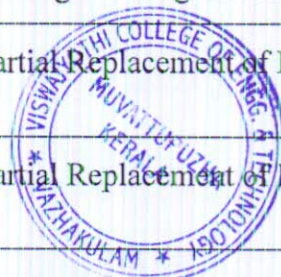
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Sl. No.	Group No	Name	Topic	Project Guide
18	5	Ankitha Manoj	Mycelium Building Baterials - A Future Sustainable Construction Material	Mrs. Finu John
19	5	Robin Oj	Mycelium Building Baterials - A Future Sustainable Construction Material	Mrs. Finu John
20	5	Vaishnav C S	Mycelium Building Baterials - A Future Sustainable Construction Material	Mrs. Finu John
21	6	Lekshmi Ajayakumar	Fruit seeds as potential coagulant in water purgation	Mrs. Finu John
22	6	Elizabeth shajan	Fruit seeds as potential coagulant in water purgation	Mrs. Finu John
23	6	Thomas Kurien	Fruit seeds as potential coagulant in water purgation	Mrs. Finu John
24	6	Yedhukrishna	Fruit seeds as potential coagulant in water purgation	Mrs. Finu John
25	7	Ann Maria Baby	Micro Silica as partial replacement of cement in concrete	Lins Paul Kuriakose
26	7	Arif Ali	Micro Silica as partial replacement of cement in concrete	Lins Paul Kuriakose
27	7	Muhammed P A	Micro Silica as partial replacement of cement in concrete	Lins Paul Kuriakose
28	7	Sandhra Sibi	Micro Silica as partial replacement of cement in concrete	Lins Paul Kuriakose
29	8	Anna Maria George	Dam break analysis of Idamalayar dam using HEC-RAS	Dr. Anoop CK
30	8	Aravind Rajeev	Dam break analysis of Idamalayar dam using HEC-RAS	Dr. Anoop CK
21	8	Dilna Kc	Dam break analysis of Idamalayar dam using HEC-RAS	Dr. Anoop CK
32	8	Harishankar Madhu	Dam break analysis of Idamalayar dam using HEC-RAS	Dr. Anoop CK
33	9	Ashly Asok	Effective use of kadukkai along with bagasse ash	Mr. Appu John
34	9	Dani Biju	Effective use of kadukkai along with bagasse ash	Mr. Appu John
35	9	Sarah Mujeeb	Effective use of kadukkai along with bagasse ash	Mr. Appu John
36	9	Ousepachan Basil	Effective use of kadukkai along with bagasse ash	Mr. Appu John
37	10	Angel Mary Joshy	Waste Foundry Sand as Partial Replacement of Fine Aggregate in Concrete	Mr. Lins Paul Kuriakose
38	10	Vandhana P V	Waste Foundry Sand as Partial Replacement of Fine Aggregate in Concrete	Mr. Lins Paul Kuriakose





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Sl. No.	Group No	Name	Topic	Project Guide
39	10	Vargheese Jaison	Waste Foundry Sand as Partial Replacement of Fine Aggregate in Concrete	Mr. Lins Paul Kuriakose
40	10	Jaswanth Sadhasivan	Waste Foundry Sand as Partial Replacement of Fine Aggregate in Concrete	Mr. Lins Paul Kuriakose




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Department of Civil Engineering



BONAFIDE CERTIFICATE

This is to certify that the Project report entitled “**STABILIZATION OF BLACK COTTON SOIL USING BOTTOM ASH AND CINER STONE DUST**” is a bonafide record of the work done by **ABDUL AZEEZ (VJC19CE001), ATHUL JOBY (VJC19CE020), ELDHO BABU (VJC19CE032), SANJU BIJU (VJC19CE065)** in partial fulfilment of the requirements for the award of the **Degree of Bachelor of Technology in Civil Engineering** of A P J Abdul Kalam Technological University (KTU).

Date: 20/06/2023
Place: Vazhakulam

Mrs. SOUMYA RANI P THOMAS
Project Coordinator
Assistant Professor
CE Dept., VJCET

Dr. ANOOP C K
Project Guide
Assistant HOD

Dr. SHINE GEORGE
HOD
CE Dept., VJCET





Department of Computer Science and Engineering
Project (2019-23 A Batch)

Sl. No	Group	Name	Project Title	Guide
1	1	Diya Anna Varghese	Plant Pest Detection And Measures	Mrs. Asha Joseph/Remya Jose
2	1	Mehanoor Basheer	Plant Pest Detection And Measures	Mrs. Asha Joseph/Remya Jose
3	1	Tincy Tomy	Plant Pest Detection And Measures	Mrs. Asha Joseph/Remya Jose
4	1	Veena Regikumar	Plant Pest Detection And Measures	Mrs. Asha Joseph/Remya Jose
5	2	Akash Shaji	B-Heal: A Framework For Integrating Health Care Services	Mrs.Remya Paul
6	2	Alan Baby	B-Heal: A Framework For Integrating Health Care Services	Mrs.Remya Paul
7	2	Basil Paul	B-Heal: A Framework For Integrating Health Care Services	Mrs.Remya Paul
8	2	Dion Paul George	B-Heal: A Framework For Integrating Health Care Services	Mrs.Remya Paul
9	3	Ben Varghese	Text Emotion Capturer	Mr. Joe Mathew Jacob
10	3	Jacob George	Text Emotion Capturer	Mr. Joe Mathew Jacob
11	3	Mathukutty Manoj	Text Emotion Capturer	Mr. Joe Mathew Jacob
12	3	Soyal Sunny	Text Emotion Capturer	Mr. Joe Mathew Jacob
13	4	Ajai C Harish	Traffic Sign Detection And Voice Alerting System	Mrs. Sona Baby
14	4	Ashique A M	Traffic Sign Detection And Voice Alerting System	Mrs. Sona Baby
15	4	Femil Francis	Traffic Sign Detection And Voice Alerting System	Mrs. Sona Baby
16	4	Harisankar C D	Traffic Sign Detection And Voice Alerting System	Mrs. Sona Baby
17	5	Alen George	Emprov:An Employee Productivity System Using Machine Learning	Mrs. Anju Markose
18	5	Joel Raju	Emprov:An Employee Productivity System Using Machine Learning	Mrs. Anju Markose
19	5	Roslfan Boy	Emprov:An Employee Productivity System Using Machine Learning	Mrs. Anju Markose
20	5	San Baby Francis	Emprov:An Employee Productivity System Using Machine Learning	Mrs. Anju Markose



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Sl. No	Group	Name	Project Title	Guide
21	6	Abhirami Biju	Signease: Real Time Sign Language Communication System Usin Deep Learning	Dr. Predeep Kumar
22	6	Hiba V Sidheek	Signease: Real Time Sign Language Communication System Usin Deep Learning	Dr. Predeep Kumar
24	6	Shafna Jaffer	Signease: Real Time Sign Language Communication System Usin Deep Learning	Dr. Predeep Kumar
25	6	Theresa Mary Suresh	Signease: Real Time Sign Language Communication System Usin Deep Learning	Dr. Predeep Kumar
26	7	Abhini M Aji	Bullyjammer : Detecting And Preventing Cyberbullying In Social Media	Mrs. Ierin Babu
27	7	Liya Mathew	Bullyjammer : Detecting And Preventing Cyberbullying In Social Media	Mrs. Ierin Babu
28	7	Rajalakshmi Raj	Bullyjammer : Detecting And Preventing Cyberbullying In Social Media	Mrs. Ierin Babu
29	7	Susan Shibu	Bullyjammer : Detecting And Preventing Cyberbullying In Social Media	Mrs. Ierin Babu
30	8	Abel Anil Thayil	A Web3.0 Real Estate Management App	Mr. Andrews Jose
31	8	Adithya Krishnan Nandagopan	A Web3.0 Real Estate Management App	Mr. Andrews Jose
32	8	Ananthakrishnan	A Web3.0 Real Estate Management App	Mr. Andrews Jose
33	8	Shaun Biju	A Web3.0 Real Estate Management App	Mr. Andrews Jose
34	9	Ann Mary Joshy	Mical -Blockchain Based Vehicle Management System	Mrs. Bency Cleetus
35	9	Evelin Martin	Mical -Blockchain Based Vehicle Management System	Mrs. Bency Cleetus
36	9	Parvana Prakash N	Mical -Blockchain Based Vehicle Management System	Mrs. Bency Cleetus
37	10	Alka Paulson	Safe Keeping Of Fprensic Evidences Using Blockchain	Mrs. Cinita Mary Mathew
38	10	Nithara K Baby	Safe Keeping Of Fprensic Evidences Using Blockchain	Mrs. Cinita Mary Mathew
39	10	Revathy Satheesan	Safe Keeping Of Fprensic Evidences Using Blockchain	Mrs. Cinita Mary Mathew
40	11	Anjali K R	Motif: A Realtime Mock Interview Platform	Mrs. Dona Jose
41	11	Anju Baby	Motif: A Realtime Mock Interview Platform	Mrs. Dona Jose
42	11	Juliya T James	Motif: A Realtime Mock Interview Platform	Mrs. Dona Jose
43	11	Krishnaja Binumon	Motif: A Realtime Mock Interview Platform	Mrs. Dona Jose
44	12	Ashin Shine	Secured Insurance Managementsystem	Mrs. Anu Jose



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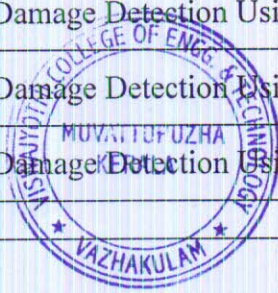
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Sl. No	Group	Name	Project Title	Guide
45	12	Edwin Chacko	Secured Insurance Managementsystem	Mrs. Anu Jose
46	12	Jefin James	Secured Insurance Managementsystem	Mrs. Anu Jose
47	13	Aleena George	Alzheimers Disease Detection	Mrs. Lakshmi Suresh
48	13	Minna Antu	Alzheimers Disease Detection	Mrs. Lakshmi Suresh
49	13	Taniya Tijo	Alzheimers Disease Detection	Mrs. Lakshmi Suresh
50	13	Tess Mary George	Alzheimers Disease Detection	Mrs. Lakshmi Suresh
51	14	Hanna Thomas	Ignitor : Universal App For Electric Vehicles	Mrs. Lithiya Sara Babu
52	14	Niniya Sugathan	Ignitor : Universal App For Electric Vehicles	Mrs. Lithiya Sara Babu
53	14	Niranjana Roy	Ignitor : Universal App For Electric Vehicles	Mrs. Lithiya Sara Babu
54	14	Sandra Ann Shibu	Ignitor : Universal App For Electric Vehicles	Mrs. Lithiya Sara Babu
55	15	Anoopa Meera Baby	Mediocre : Block Chain Based Counterfeit Medicine Authentication System	Mrs. Ritty Jacob
56	15	Jelena Jojo	Mediocre : Block Chain Based Counterfeit Medicine Authentication System	Mrs. Ritty Jacob
57	15	Josmy Johny	Mediocre : Block Chain Based Counterfeit Medicine Authentication System	Mrs. Ritty Jacob
58	15	Shifa Joshy	Mediocre : Block Chain Based Counterfeit Medicine Authentication System	Mrs. Ritty Jacob
59	16	Ashbin Roy	Blockchain And MI Bases System To Facilitate Scrapping Of Cars	Mrs. Libsy Ann Merin Baby
60	16	Dilan Joseph	Blockchain And MI Bases System To Facilitate Scrapping Of Cars	Mrs. Libsy Ann Merin Baby
61	16	Paul Vincent	Blockchain And MI Bases System To Facilitate Scrapping Of Cars	Mrs. Libsy Ann Merin Baby
62	17	Eldho Varghese	Road Damage Detection Using Yolo	Mrs. Nimmy George
63	17	Josu Geo	Road Damage Detection Using Yolo	Mrs. Nimmy George
64	17	Prival Bindu Prakash	Road Damage Detection Using Yolo	Mrs. Nimmy George



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Department of Computer Science and Engineering
Project (2019-23 B Batch)

Sl. No	Group No	Name	Project Title	Guide
1	1	Alan D Andoor	Crop Recommendation System-Cropigo	Mrs. Arsha J K
2	1	Mathew K Shibu	Crop Recommendation System-Cropigo	Mrs. Arsha J K
3	1	Nelvin Mathew	Crop Recommendation System-Cropigo	Mrs. Arsha J K
4	1	Roshan Shaji	Crop Recommendation System-Cropigo	Mrs. Arsha J K
5	2	Airin Susan Wilson	Personal Assistant For Visually Impaired People	Mrs. Sona Baby
6	2	Elizabeth Lovin	Personal Assistant For Visually Impaired People	Mrs. Sona Baby
7	2	Meera Susan Regi	Personal Assistant For Visually Impaired People	Mrs. Sona Baby
8	2	Reshma Joy	Personal Assistant For Visually Impaired People	Mrs. Sona Baby
9	3	Alha Mary Jacob	Enhancing Electoral Transparency :Empowering Voting System With Block Chain	Mrs.Remyapaul
10	3	Elizabeth George	Enhancing Electoral Transparency :Empowering Voting System With Block Chain	Mrs.Remyapaul
11	3	Ivin Rafi George	Enhancing Electoral Transparency :Empowering Voting System With Block Chain	Mrs.Remyapaul
12	3	Mariya Roy	Enhancing Electoral Transparency :Empowering Voting System With Block Chain	Mrs.Remyapaul
13	4	Ann Mary Peter	Health Insurance Cost Prediction Using Machine Learning	Mrs. Bency Cleatus
14	4	Bindhiya C Philip	Health Insurance Cost Prediction Using Machine Learning	Mrs. Bency Cleatus
15	4	Maria Manoj	Health Insurance Cost Prediction Using Machine Learning	Mrs. Bency Cleatus
16	4	Priyala Babu	Health Insurance Cost Prediction Using Machine Learning	Mrs. Bency Cleatus
17	5	Ajin V M	Job Forecasting: Predicting Scope Of Jobs	Mrs. Asha Joseph
18	5	Anandhu Vasu	Job Forecasting: Predicting Scope Of Jobs	Mrs. Asha Joseph
19	5	Ben Thomas	Job Forecasting: Predicting Scope Of Jobs	Mrs. Asha Joseph
20	5	Sooraj Shaji	Job Forecasting: Predicting Scope Of Jobs	Mrs. Asha Joseph
21	6	Alin Mary Eldhose	Safe Guarding Road Safety :A Novel Approach For Predicting Driver Fatigue In Real Time	Mrs. Lakshmi Suresh
22	6	Anju Mary Thomas	Safe Guarding Road Safety :A Novel Approach For Predicting Driver Fatigue In Real Time	Mrs. Lakshmi Suresh



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Sl. No	Group No	Name	Project Title	Guide
23	6	Avanthika R	Safe Guarding Road Safety :A Novel Approach For Predicting Driver Fatigue In Real Time	Mrs. Lakshmi Suresh
24	6	Minnu Benny	Safe Guarding Road Safety :A Novel Approach For Predicting Driver Fatigue In Real Time	Mrs. Lakshmi Suresh
25	7	Abino Poullose	Ai-Powered Threat Detector For Intelligent Surveillance Systems	Mrs. Sabitha Raju
26	7	Albin Thomas	Ai-Powered Threat Detector For Intelligent Surveillance Systems	Mrs. Sabitha Raju
27	7	Alen Belji	Ai-Powered Threat Detector For Intelligent Surveillance Systems	Mrs. Sabitha Raju
28	7	Alvin Benedict	Ai-Powered Threat Detector For Intelligent Surveillance Systems	Mrs. Sabitha Raju
29	8	Ann Maria Dominic	Early Detection Of Sld In Children - Sake	Mrs. Mayadevi P A
30	8	Kalyani Babu	Early Detection Of Sld In Children - Sake	Mrs. Mayadevi P A
31	8	Sandra Skaria	Early Detection Of Sld In Children - Sake	Mrs. Mayadevi P A
32	8	Veena R	Early Detection Of Sld In Children - Sake	Mrs. Mayadevi P A
33	9	Albin Biju	An Efficient Student Performance Evaluation And Result Prediction System	Mrs. Ierin Babu
34	9	Anil Biju	An Efficient Student Performance Evaluation And Result Prediction System	Mrs. Ierin Babu
35	9	Dion Abraham Jordy	An Efficient Student Performance Evaluation And Result Prediction System	Mrs. Ierin Babu
36	9	Eldhose Roy	An Efficient Student Performance Evaluation And Result Prediction System	Mrs. Ierin Babu
37	10	Anjaly Biju	Diabetic Retinopathy Detection	Mrs. Lithiya Sara Babu
38	10	Grace Maria Babu	Diabetic Retinopathy Detection	Mrs. Lithiya Sara Babu
39	10	Meenakshy Devan	Diabetic Retinopathy Detection	Mrs. Lithiya Sara Babu
40	11	Anna Manoj	Pneumonia Detection Using Cnn And Deep Learning	Mrs. Neenu Daniel
41	11	Ashna Nazar	Pneumonia Detection Using Cnn And Deep Learning	Mrs. Neenu Daniel
42	11	Georgin Joy	Pneumonia Detection Using Cnn And Deep Learning	Mrs. Neenu Daniel
43	11	Georgina Ann Leons	Pneumonia Detection Using Cnn And Deep Learning	Mrs. Neenu Daniel
44	12	Devika Mami Sankar	Online Transaction And Fraud Detection System	Mrs. Dona Jose
45	12	Dilna Elizabeth Roy	Online Transaction And Fraud Detection System	Mrs. Dona Jose



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Sl. No	Group No	Name	Project Title	Guide
46	12	Jiya Johnson	Online Transaction And Fraud Detection System	Mrs. Dona Jose
47	12	Sneha Maria Biju	Online Transaction And Fraud Detection System	Mrs. Dona Jose
48	13	Allen Sajimon	Block Chain Based Whistleblowing Platform	Mrs. Anu Jose
49	13	Anantha Krishnan K S	Block Chain Based Whistleblowing Platform	Mrs. Anu Jose
50	13	Dijo Daison	Block Chain Based Whistleblowing Platform	Mrs. Anu Jose
51	13	Jefrin Eldhos Joy	Block Chain Based Whistleblowing Platform	Mrs. Anu Jose
52	14	Ann Mary Mathew	Voice And Gesture Based Virtual Desktop Assistant	Mrs. Libsy Ann Merin Baby
53	14	Anumol Thankachan	Voice And Gesture Based Virtual Desktop Assistant	Mrs. Libsy Ann Merin Baby
54	14	Irene Sunny	Voice And Gesture Based Virtual Desktop Assistant	Mrs. Libsy Ann Merin Baby
55	14	Thara Rose Antony	Voice And Gesture Based Virtual Desktop Assistant	Mrs. Libsy Ann Merin Baby
56	15	Akhil M Regi	Brain Tumor Detection And Drug Suggestion Using Deep Learning And Image Processing	Mrs. Nimmy George
57	15	Amal Abraham	Brain Tumor Detection And Drug Suggestion Using Deep Learning And Image Processing	Mrs. Nimmy George
58	15	Ashik Paul	Brain Tumor Detection And Drug Suggestion Using Deep Learning And Image Processing	Mrs. Nimmy George
59	15	Ashwin Eldose	Brain Tumor Detection And Drug Suggestion Using Deep Learning And Image Processing	Mrs. Nimmy George
60	16	Adwaith P A	Blockchain Based Management For Organ Donation And Transplantation	Mrs. Anju Markose
61	16	Ashil Krishna P S	Blockchain Based Management For Organ Donation And Transplantation	Mrs. Anju Markose
62	16	Sharon Jos Johnson	Blockchain Based Management For Organ Donation And Transplantation	Mrs. Anju Markose
63	16	Mahin Nazar	Blockchain Based Management For Organ Donation And Transplantation	Mrs. Anju Markose



[Signature]
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
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VAZHAKULAM, 686670



BONAFIDE CERTIFICATE

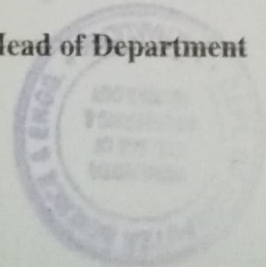
This is to certify that the project report entitled “**VOICE AND GESTURE BASED VIRTUAL DESKTOP ASSISTANT**” is a bonafide work done by **Ms. ANN MARY MATHEW (VJC19CS036)**, **Ms. ANUMOL THANKACHAN (VJC19CS039)**, **Ms. IRENE SUNNY (VJC19CS072)**, **Ms. THARA ROSE ANTONY (VJC19CS121)** in partial fulfillment for the award of the Degree of Bachelor of Technology in Computer Science & Engineering from APJ Abdul Kalam Technological University, Thiruvananthapuram, Kerala during the academic year 2022-2023.

Internal Supervisor

External Supervisor

Project Coordinator

Head of Department





Department of Electronics and Communication Engineering Project (2019-23 Batch)

Sl. No.	Group No	Name	Topic	Guide
1	1	Aadithya Premnath	Third Eye : Aid For Blind	Dr.Naveen Jacob
2	1	Albin Roy	Third Eye : Aid For Blind	Dr.Naveen Jacob
3	1	Josin Emmanuel	Third Eye : Aid For Blind	Dr.Naveen Jacob
4	2	Abhishek George	Iot Based Vehicle Speed Control Automatically In Restricted Area Using Rfid	Ms.Smitha Cyriac
5	2	Ananthkrishnan S Nair	Iot Based Vehicle Speed Control Automatically In Restricted Area Using Rfid	Ms.Smitha Cyriac
6	2	Joyal Jose	Iot Based Vehicle Speed Control Automatically In Restricted Area Using Rfid	Ms.Smitha Cyriac
7	3	Abin Baby	Automated Attendance System	Ms. Manju Thomas T
8	3	Ajai Gopan	Automated Attendance System	Ms.Manju Thomas T
9	3	Aswin S. Kumar	Automated Attendance System	Ms.Manju Thomas T
10	4	Aleena Alocious	Agricultural Robot	Dr.Cyriac Odackal M
11	4	Alka Paulose	Agricultural Robot	Dr.Cyriac Odackal M
12	4	Anamika Asokan	Agricultural Robot	Dr.Cyriac Odackal M
13	5	Aparna Gopi	Implementation Of Leach Algorithm In Wireless Sensor Network	Ms.Niji Mathews
14	5	Bintu Abraham	Implementation Of Leach Algorithm In Wireless Sensor Network	Ms.Niji Mathews
15	5	Samardhi Sunil Inamdar	Implementation Of Leach Algorithm In Wireless Sensor Network	Ms.Niji Mathews
16	6	Celiya Saju	Wild Animal Alerting And Forest Fire Detection System	Ms.Rose Maria Jose
17	6	Elezabeth Mariya Saji	Wild Animal Alerting And Forest Fire Detection System	Ms.Rose Maria Jose
18	6	Emy Maria Tom	Wild Animal Alerting And Forest Fire Detection System	Ms.Rose Maria Jose
19	6	Riya Benny	Wild Animal Alerting And Forest Fire Detection System	Ms.Rose Maria Jose
20	7	Dhilna Biju	Image Classification Using Neural Network	Ms.Vinija Kurian
21	7	Maria Sabu	Image Classification Using Neural Network	Ms.Vinija Kurian
Sl.	Group	Name	Topic	Guide



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No.	No			
22	7	Shalu Susan Babu	Image Classification Using Neural Network	Ms.Vinija Kurian
23	8	Don Mathew Varghese	Under Water Rov	Mr.Manju Jose
24	8	Hrishi Venkitesh M	Under Water Rov	Mr.Manju Jose
25	8	Jose Thankachan	Under Water Rov	Mr.Manju Jose
26	9	Giya Baby	Automatic Wall Painting Robot	Ms.Ranjini Surendran
27	9	Minnu Thamp	Automatic Wall Painting Robot	Ms.Ranjini Surendran
28	9	Sruthi Sathyan	Automatic Wall Painting Robot	Ms.Ranjini Surendran
29	10	Jayasurya Krishnakumar	Solar Based River Cleaning Machine	Ms.Manju Thomas T
30	10	Roshan Biju	Solar Based River Cleaning Machine	Ms.Manju Thomas T
31	10	Vishnu M Chandrahas	Solar Based River Cleaning Machine	Ms.Manju Thomas T
32	11	Jofia John	Autonomous Delivery Robot	Ms.Anitta Thomas
33	11	Megha Biju	Autonomous Delivery Robot	Ms.Anitta Thomas
34	11	Naisil Biju	Autonomous Delivery Robot	Ms.Anitta Thomas
35	12	Nandhana . P. Rajesh	Home Automation And Security With Esp	Ms.Ranjini Surendran
36	12	Shinitha Joseph	Home Automation And Security With Esp	Ms.Ranjini Surendran
37	12	Sivaganga R Nair	Home Automation And Security With Esp	Ms.Ranjini Surendran
38	12	Sujithra .J	Home Automation And Security With Esp	Ms.Ranjini Surendran
39	13	P J Harikrishnan	IoT Based Bus Tracking And Notification System	Mr.Anish M Jose
40	13	Philip Biju	IoT Based Bus Tracking And Notification System	Mr.Anish M Jose
41	13	Sebin Jaison	IoT Based Bus Tracking And Notification System	Mr.Anish M Jose
42	14	Adorn Iypachen	Smart Sprinkler For Fire Extinguishment	Dr. Tony D
43	14	Arya Manohar	Smart Sprinkler For Fire Extinguishment	Dr. Tony D
44	14	Basil Benny	Smart Sprinkler For Fire Extinguishment	Dr. Tony D
45	15	Ajith George Louis	Comparative Analysis For The Performance And Evaluation Of Full Adders Using Reversible Logic	Ms.Merlin Thomas
46	15	Akshay Sankar P	Comparative Analysis For The Performance And Evaluation Of Full Adders Using Reversible Logic	Ms.Merlin Thomas



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Sl. No.	Group No	Name	Topic	Guide
47	15	Ashik George	Comparative Analysis For The Performance And Evaluation Of Full Adders Using Reversible Logic	Ms.Merlin Thomas
48	16	Albin Sabu	Pipeline Inspection Robot	Ms.Cuckoo Anitha Joseph
49	16	Joe P B	Pipeline Inspection Robot	Ms.Cuckoo Anitha Joseph
50	16	Thomaskutty Talvar	Pipeline Inspection Robot	Ms.Cuckoo Anitha Joseph
51	17	Antony Jose	Face Recognition Glass	Ms.Vanitha Rugmoni
52	17	Jibin Joy	Face Recognition Glass	Ms.Vanitha Rugmoni
53	17	Tony John	Face Recognition Glass	Ms.Vanitha Rugmoni
54	18	Benson John	Smart Wearable For Visually Impaired	Ms.Anurani Philip
55	18	Imrankhan A M	Smart Wearable For Visually Impaired	Ms.Anurani Philip
56	18	Leon Johnson	Smart Wearable For Visually Impaired	Ms.Anurani Philip
57	18	Muhammad Safthar M A	Smart Wearable For Visually Impaired	Ms.Anurani Philip
58	19	Edwin Siby	Magic Mirror Ai	Mr.Manu Jose
59	19	Rohan Bijoy	Magic Mirror Ai	Mr.Manu Jose
60	19	Stebin Jose	Magic Mirror Ai	Mr.Manu Jose
61	20	Brijit Saju	Rf- Controlled Robot With Night Vision And Thermal Imaging Camera For Surveillance	Ms.Anu Kunjachan C
62	20	Joyal Johnson	Rf- Controlled Robot With Night Vision And Thermal Imaging Camera For Surveillance	Ms.Anu Kunjachan C
63	20	Pranav Pradeep	Rf- Controlled Robot With Night Vision And Thermal Imaging Camera For Surveillance	Ms.Anu Kunjachan C
64	21	Anitta Mavin	Restaurant Service Robot	Ms.Lekshmi M S
65	21	Bijila M Eldho	Restaurant Service Robot	Ms.Lekshmi M S
66	21	Krishna S Biju	Restaurant Service Robot	Ms.Lekshmi M S
67	22	Ann Maria Vinod	Logistic Robot	Ms.Smitha Cyriac
68	22	Ann Mary James	Logistic Robot	Ms.Smitha Cyriac
69	22	Devika Subash	Logistic Robot	Ms.Smitha Cyriac
70	23	Aparna Biju	Warfield Spy Robot	Ms.Niji Mathews
71	23	Joyal Jose	Warfield Spy Robot	Ms.Niji Mathews





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Sl. No.	Group No	Name	Topic	Guide
72	23	Rosemol John	Warfield Spy Robot	Ms.Niji Mathews
73	24	Ashly Joshy	Glass Cleaning Robot	Ms.Vinija Kurian
74	24	Ashna A A	Glass Cleaning Robot	Ms.Vinija Kurian
75	24	Biyanka Mani	Glass Cleaning Robot	Ms.Vinija Kurian
76	25	Binusree P A	Railway Track Crack Detection Robot	Ms.Anitta Thomas
77	25	Finu James	Railway Track Crack Detection Robot	Ms.Anitta Thomas
78	25	Meenu K R	Railway Track Crack Detection Robot	Ms.Anitta Thomas
79	25	Revathy Rajeevan	Railway Track Crack Detection Robot	Ms.Anitta Thomas
80	26	Dinu Joy	Trashbot	Ms.Vanitha Rugmoni
81	26	Maria Reena Roy	Trashbot	Ms.Vanitha Rugmoni
82	26	Sandra Santy	Trashbot	Ms.Vanitha Rugmoni



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Department of Electronics and Communication Engineering



BONAFIDE CERTIFICATE

This is to certify that the project report entitled "LOGISTIC ROBOT" is a bonafide record of the work done by ANN MARIA VINOD (Reg No: VJC19EC015), ANN MARY JAMES (Reg No: VJC19EC016), DEVIKA SUBASH (Reg No: VJC19EC033) in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in Electronics and Communication Engineering of APJ Abdul Kalam Technological University, Thiruvananthapuram.

Date:

Place: Vazhakulam

External Examiner

Dr. Naveen Jacob

HOD

ECE Dept. VJCET

Mrs. Smitha Cyriac

Project Guide

Assistant Professor

ECE Dept. VJCET

Mrs. Merlin Thomas

Project Coordinator

Assistant Professor

ECE Dept. VJCET



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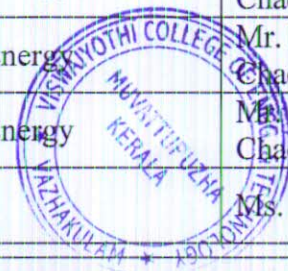
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Department of Electrical and Electronics Engineering Project (2019-23 Batch)

Sl.No.	Group	Name	Topic	Guide
1	1	Abhijith M.A	Automatic Headlight System With Smart Road Accident Detection And Communication	Dr. Sony Kurian
2	1	Syam Krishna	Automatic Headlight System With Smart Road Accident Detection And Communication	Dr. Sony Kurian
3	1	Aswani Chandran	Automatic Headlight System With Smart Road Accident Detection And Communication	Dr. Sony Kurian
4	1	Anju V	Automatic Headlight System With Smart Road Accident Detection And Communication	Dr. Sony Kurian
5	2	Abhin Manoj	Audio And Text Transmission Using Lifi Technology	Ms. Cini K
6	2	Albin Jose	Audio And Text Transmission Using Lifi Technology	Ms. Cini K
7	2	Jishnu Anil	Audio And Text Transmission Using Lifi Technology	Ms. Cini K
8	3	Abin Benny	Iot Based Neonatal Incubator	Ms. Smitha Jacob
9	3	Shana P.B	Iot Based Neonatal Incubator	Ms. Smitha Jacob
10	3	Janet Johnson	Iot Based Neonatal Incubator	Ms. Smitha Jacob
11	4	Alan K Binoy	Sun Tracking Solar Panel	Ms. Mereya Baby
12	4	Sachin Saji	Sun Tracking Solar Panel	Ms. Mereya Baby
13	4	Meera R	Sun Tracking Solar Panel	Ms. Mereya Baby
14	4	Sayana Fathima	Sun Tracking Solar Panel	Ms. Mereya Baby
15	5	Amutha Raj	Solar Powered Smart Irrigation System Using Iot	Mr. Dileep Kumar P
16	5	Nevin Paul Saju	Solar Powered Smart Irrigation System Using Iot	Mr. Dileep Kumar P
17	5	Sandu Saji	Solar Powered Smart Irrigation System Using Iot	Mr. Dileep Kumar P
18	5	Seethal Manoj Mohan	Solar Powered Smart Irrigation System Using Iot	Mr. Dileep Kumar P
19	6	Anakha Venugopal	Electric Vehicle Operating On Solar Energy	Mr. Babu T Chacko
20	6	George Varghese	Electric Vehicle Operating On Solar Energy	Mr. Babu T Chacko
21	6	Geo Wilson	Electric Vehicle Operating On Solar Energy	Mr. Babu T Chacko
22	6	Jyothika George	Electric Vehicle Operating On Solar Energy	Mr. Babu T Chacko
23	7	Dimal Michael	Smart Sprinkler	Ms. Jis Jose





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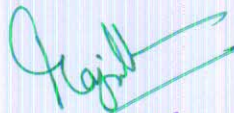
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Sl.No.	Group	Name	Topic	Guide
24	7	Nakul B	Smart Sprinkler	Ms. Jis Jose
25	7	Vishal H	Smart Sprinkler	Ms. Jis Jose
26	8	Emmanuel Pious	Wi-Fi Controlled Robotic Arm With Image Processing	Mr. Jomu M George
27	8	Felix Steephen	Wi-Fi Controlled Robotic Arm With Image Processing	Mr. Jomu M George
28	8	Mariya Benny	Wi-Fi Controlled Robotic Arm With Image Processing	Mr. Jomu M George
29	8	Gayathri L Kumar	Wi-Fi Controlled Robotic Arm With Image Processing	Mr. Jomu M George




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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



BONAFIDE CERTIFICATE


This is to certify that the Design Project entitled “IoT BASED NEONATAL INCUBATOR” is a bonafide record of the work by **ABIN BENNY (VJC19EE003)**, **JANET JOHNSON (VJC19EE017)** and **SHANA P B (VJC19EE027)** in partial fulfillment of the requirements for the award of Degree of **Bachelor of Technology** in Electrical and Electronics Engineering of APJ Abdul Kalam Technological University during academic year 2022-2023.


Ms. Mereya Baby

Project Coordinator


Ms. Smitha Jacob

Project Guide


Dr. Sony Kurian

Head of the Department



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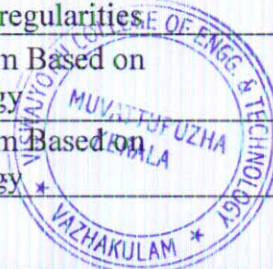
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Department of Information Technology Project (2019-23 Batch)

Sl. No.	Group No.	Name	Topic	Guide
1	1	Bennet Joy	Personal Assistance for Disabled People	Ms. Anitta K Mathew
2	1	Johan Mathew	Personal Assistance for Disabled People	Ms. Anitta K Mathew
3	1	Kevin Vinod	Personal Assistance for Disabled People	Ms. Anitta K Mathew
4	2	Basil Biju	Personality Prediction Via CV Analysis using Machine Learning	Ms. Shilpa Sugathan
5	2	Bertin Peter	Personality Prediction Via CV Analysis using Machine Learning	Ms. Shilpa Sugathan
6	2	Cyriac Paul Bissy	Personality Prediction Via CV Analysis using Machine Learning	Ms. Shilpa Sugathan
7	2	Richard Peter	Personality Prediction Via CV Analysis using Machine Learning	Ms. Shilpa Sugathan
8	3	Allen Benny	Machine Learning Enhanced Web App for Smart Investments	Ms. Juliet A Murali
9	3	Arun Tomy	Machine Learning Enhanced Web App for Smart Investments	Ms. Juliet A Murali
10	3	Jibin Benny	Machine Learning Enhanced Web App for Smart Investments	Ms. Juliet A Murali
11	3	Ivine jaimon	Machine Learning Enhanced Web App for Smart Investments	Ms. Juliet A Murali
12	4	Allen Benny	Malicious URL Detection Based on Machine Learning	Ms. Ann Preetha Jose
13	4	Arun Tomy	Malicious URL Detection Based on Machine Learning	Ms. Ann Preetha Jose
14	4	Jibin Benny	Malicious URL Detection Based on Machine Learning	Ms. Ann Preetha Jose
15	4	Ivine jaimon	Malicious URL Detection Based on Machine Learning	Ms. Ann Preetha Jose
16	5	Alfin Davis	Blockchain Based Charity Donation Scheme to Handle Financial Irregularities	Mr. Nidhin R
17	5	Allan john Scott	Blockchain Based Charity Donation Scheme to Handle Financial Irregularities	Mr. Nidhin R
18	5	Roshan Roy Eldo	Blockchain Based Charity Donation Scheme to Handle Financial Irregularities	Mr. Nidhin R
19	5	Sreevisakh	Blockchain Based Charity Donation Scheme to Handle Financial Irregularities	Mr. Nidhin R
20	6	Alen Salu	Housing Rental System Based on Blockchain Technology	Ms. Josna Jose
21	6	Thomas Paulson	Housing Rental System Based on Blockchain Technology	Ms. Josna Jose





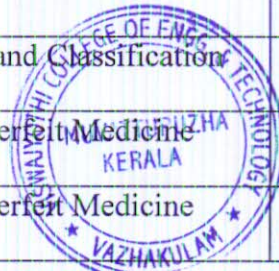
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Sl. No.	Group No.	Name	Topic	Guide
22	6	Milan K Biju	Housing Rental System Based on Blockchain Technology	Ms. Josna Jose
23	6	Dilis Denny	Housing Rental System Based on Blockchain Technology	Ms. Josna Jose
24	7	Anna Susan Jose	Deep Learning Based Mobile Application Design for Smart Parking	Ms. Salini Dev P V
25	7	Leona Maria	Deep Learning Based Mobile Application Design for Smart Parking	Ms. Salini Dev P V
26	7	Smruthi Babu	Deep Learning Based Mobile Application Design for Smart Parking	Ms. Salini Dev P V
28	7	Swathy Krishna	Deep Learning Based Mobile Application Design for Smart Parking	Ms. Salini Dev P V
29	8	Allen Shajan	Disease Prediction Using Machine Learning	Ms. Ann Preetha Jose
30	8	Aswin Krishna R	Disease Prediction Using Machine Learning	Ms. Ann Preetha Jose
30	8	Binto Tom Joseph	Disease Prediction Using Machine Learning	Ms. Ann Preetha Jose
32	8	Nandhu Prakash	Disease Prediction Using Machine Learning	Ms. Ann Preetha Jose
33	9	Dany Tomy	Cyberbullying Detection Using Deep Learning Approach	Mr. Nidhin R
34	9	Deyon Sebastian	Cyberbullying Detection Using Deep Learning Approach	Mr. Nidhin R
35	9	Jeril Jose	Cyberbullying Detection Using Deep Learning Approach	Mr. Nidhin R
36	9	Naveen Sibi	Cyberbullying Detection Using Deep Learning Approach	Mr. Nidhin R
37	10	Aiswarya Unnikrishnan	Tourism Management System	Ms. Tiny Molly V
38	10	Emma Theresa	Tourism Management System	Ms. Tiny Molly V
39	10	Mridula Ann Oomen	Tourism Management System	Ms. Tiny Molly V
40	10	Alen Siby	Plant Disease Detection and Classification by Deep Learning	Ms. Juliet A Murali
41	10	Athira Babu	Plant Disease Detection and Classification by Deep Learning	Ms. Juliet A Murali
42	10	Rozella Maria Treesa Boban	Plant Disease Detection and Classification by Deep Learning	Ms. Juliet A Murali
43	11	Ben Raj	Blockchain Based Counterfeit Medicine Autentication System	Ms. Jesline Joseph
44	11	Joe Saju	Blockchain Based Counterfeit Medicine Autentication System	Ms. Jesline Joseph





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Sl. No.	Group No.	Name	Topic	Guide
45	11	Nevin Shaju	Blockchain Based Counterfeit Medicine Authentication System	Ms. Jesline Joseph
46	11	Sivaprasad	Blockchain Based Counterfeit Medicine Authentication System	Ms. Jesline Joseph
47	12	AmjithKumar P.U	Theft/Intrusion Detection Using Computer Vision	Ms. Jesline Joseph
48	12	Blesson Manjakunnel	Theft/Intrusion Detection Using Computer Vision	Ms. Jesline Joseph
49	12	Jesson Jose	Theft/Intrusion Detection Using Computer Vision	Ms. Jesline Joseph
50	12	Roney Sajee	Theft/Intrusion Detection Using Computer Vision	Ms. Jesline Joseph
51	13	Aleena Joseph	Deep Learning Based Respiratory Sound Analysis for Detection of Chronic Obstructive Pulmonary Disease	Dr. Anju Susan George
52	13	Benno Baby	Deep Learning Based Respiratory Sound Analysis for Detection of Chronic Obstructive Pulmonary Disease	Dr. Anju Susan George
53	13	Sreelakshmi K.S	Deep Learning Based Respiratory Sound Analysis for Detection of Chronic Obstructive Pulmonary Disease	Dr. Anju Susan George
54	14	Aleena Wilson	Stray Dogs Behavior Detection in Urban Area Video Surveillance Streams.	Ms. Josna Jose
55	14	Anjali Saji	Stray Dogs Behavior Detection in Urban Area Video Surveillance Streams.	Ms. Josna Jose
56	14	Jefretta James	Stray Dogs Behavior Detection in Urban Area Video Surveillance Streams.	Ms. Josna Jose
57	14	Susmi Shaji	Stray Dogs Behavior Detection in Urban Area Video Surveillance Streams.	Ms. Josna Jose



[Handwritten Signature]
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VISWAJYOTHI COLLEGE OF ENGINEERING AND TECHNOLOGY, VAZHAKULAM

Department of Information Technology




BONAFIDE CERTIFICATE


This is to certify that the Main Project Report entitled "DISEASE PREDICTIOIN USING MACHINE LEARNING" is a bonafide record of the work by ALEN SHAJAN (VJC19IT007), ASWIN KRISHNA R (VJC19IT015), BINTO TOM JOSEPH (VJC19IT022) and NANDHU PRAKASH (VJC19IT043) in partial fulfilment of the requirements for the award of the Degree of Bachelor of Technology in Information Technology of APJ Abdul Kalam Technological University.

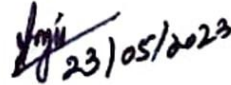
Date: 22/5/23

Place: Vazhakulam


Mrs. Juliet A Murali
Assistant Professor
Project Coordinator
Dept. of IT, VJCET




Mrs. Ann Preeetha Jose
Assistant Professor
Project Guide
Dept. of IT, VJCET


Dr. Anju Susan George
Associate Professor and HoD
Dept. of IT, VJCET

HEAD, INFORMATION TECHNOLOGY DEPT
VISWAJYOTHI COLLEGE OF ENGG. & TECHNOLOGY
VAZHAKULAM P.O., MUVATTUPUZHA



Department of Mechanical Engineering
Project (2019-23 B Batch)

Sl.No.	Group	Name of the Candidate	Project Title	Guide
1	1	Abhinand S Nair	Parametric Study And Analysis Of A Turbofan Engine	Nidheesh K
2	1	Ashin K Sunny	Parametric Study And Analysis Of A Turbofan Engine	Nidheesh K
3	1	Basil T E	Parametric Study And Analysis Of A Turbofan Engine	Nidheesh K
4	2	Abin Cheriyan	In House Hydrophonic System With Controlled Environment	Abraham Antony
5	2	Akshay Jose	In House Hydrophonic System With Controlled Environment	Abraham Antony
6	2	Jude Joseph V M	In House Hydrophonic System With Controlled Environment	Abraham Antony
7	3	Abraham Paul	Inorganic Coated Texile Fibre Reinforced Epoxy Composite	Unnikrishnan T G
8	3	Alush T Anil	Inorganic Coated Texile Fibre Reinforced Epoxy Composite	Unnikrishnan T G
9	3	Jose Babu	Inorganic Coated Texile Fibre Reinforced Epoxy Composite	Unnikrishnan T G
10	4	Akash Adithyan	Cfd Analysis Of Battery Pack Using Open Foam	Eldhose Kurian
11	4	Albert Vincent	Cfd Analysis Of Battery Pack Using Open Foam	Eldhose Kurian
12	4	Febin Sidheek	Cfd Analysis Of Battery Pack Using Open Foam	Eldhose Kurian
13	5	Alan Reji	Solar Powered Drinking Water Cooler	Arun K R
14	5	Bimal Xaviour	Solar Powered Drinking Water Cooler	Arun K R
15	5	Jince Jose	Solar Powered Drinking Water Cooler	Arun K R
16	6	Alfred Sajan C	Portable Unloading Machine	Dr. Arun Raphel
17	6	Alvin Siby	Portable Unloading Machine	Dr. Arun Raphel
18	6	Aravind T Biju	Portable Unloading Machine	Dr. Arun Raphel
19	7	Aravind C Kumar	Automated Drilling Machine	Akash Paul Savio
20	7	Paul Mathew	Automated Drilling Machine	Akash Paul Savio
21	7	Sarath S Nair	Automated Drilling Machine	Akash Paul Savio
22	8	Arun Tony	Gauss Rifle With Mechanical Feeding System	Nibin B
23	8	Jewel Suresh Johns	Gauss Rifle With Mechanical Feeding System	Nibin B
24	8	Yadu Krishnan	Gauss Rifle With Mechanical Feeding System	Nibin B





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Sl.No.	Group	Name of the Candidate	Project Title	Guide
25	9	Ashik Sabeesh	Capsees	Anoop Joy
26	9	Athil Rasheed	Capsees	Anoop Joy
27	9	Eldhose Skaria	Capsees	Anoop Joy
28	10	Aswin R Nair	Plastic Bag Shredding Machine	Dr.Arun K
29	10	Athul Paul	Plastic Bag Shredding Machine	Dr.Arun K
30	10	Vivek P V	Plastic Bag Shredding Machine	Dr.Arun K
31	11	Basil Boban	Remot Controlled Tree Climber	Abraham Antony
32	11	Binal C Anil	Remot Controlled Tree Climber	Abraham Antony
33	11	Dericson P Rajesh	Remot Controlled Tree Climber	Abraham Antony
34	12	Eldho M Biju	Fabrication Of Portal Dryer	Eldhose Paul
35	12	Jackson Joshy	Fabrication Of Portal Dryer	Eldhose Paul
36	12	Renjith Kumar	Fabrication Of Portal Dryer	Eldhose Paul
37	13	John Pulickakudiyil	Glove Donning And Disrobing System	Vinoj K
38	13	Joyal C Benny	Glove Donning And Disrobing System	Vinoj K
39	13	Nandaraj P S	Glove Donning And Disrobing System	Vinoj K
40	14	Abhishek Mukesh	Design And Analysis Of Archemidian Screw Turbine	Rakesh K
41	14	Denny Stephan	Design And Analysis Of Archemidian Screw Turbine	Rakesh K
42	14	Rahul R	Design And Analysis Of Archemidian Screw Turbine	Rakesh K
43	15	Basil Mathew	Automatic Black Board Cleaner	Dr. K Shunmugesh
44	15	Karthikeyan Baiju	Automatic Black Board Cleaner	Dr. K Shunmugesh



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**VISWAJYOTHI COLLEGE OF ENGINEERING
& TECHNOLOGY, VAZHAKULAM**



BONAFIDE CERTIFICATE

This is to certify that the project entitled "DEVELOPMENT OF AN EVAPORATIVE DRINKING WATER COOLER" submitted by **Alan Reji, Bimal Xaviour, and Jince Jose** for the award of the Degree of Bachelor of Technology in Mechanical Engineering is a bonafide report of the work carried out under my guidance and supervision at Viswajyothi College of Engineering & Technology, Vazhakulam.

Mr. ARUN K.R
Project Supervisor

Dr. SHUNMUGESH K
Project Coordinator

Dr. SHUNMUGESH K
HOD MED

Place: Vazhakulam
Date: 22/05/2023





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Department of Master of Business Administration
Project (2021-23Batch)

Sl.No.	Group No.	Name	Topic	Guide
1	1	Aghila K B	A Study on the Quality of Work Life Of Employees In It Industry	Dr. Anish John A
2	2	Abin K J	Study on Impact Of Employee Motivation On Their Job Satisfaction With Special Reference Health Care Sector	Dr.Anjali John
3	3	Ajith Antony	A Study of Factors Affecting Brand Image On Consumer Purchase Behaviour of Nippon Decorative Paints in Ernakulam District.	Ms. Merrin Geordie Pottas
4	4	Akash Shajr	A Study on Welfare Measure and Its Impact on Employee's Job Satisfaction with Special Reference to IT Industry	Dr. Anish John A
5	5	Alan Alias	A Study on Factors Influencing Consumer Satisfaction of RCM Products With Reference to Ernakulam City	Dr. Jose Mamman
6	6	Albetrise Mariya Denny	A Study on Factors Influencing Investment Decisions Of Youth With Reference To Ernakulam District	Mr. Sebin Joseph
7	7	Albina Sebastian	A Study on The Impact Of Monetary Incentives On Performance Of Employees In The Organization In Ernakulam District	Ms. Riya Susan Skaria
8	8	Aravind N M	A Study On The Effect Of Work Environment On Job Satisfaction Of Employees In Basil Natural TSR Pvt. Ltd.	Dr. Jose Mamman
9	9	Arun Roy	A Study Effectiveness Of Training And Development On The Performance Of Employees In It Industry	Ms. Riya Susan Skaria
10	10	Ashok Shankar	A Study On The Potential Impact Of Block Chain Technology On The Stock Market	Mr. Sebin Joseph
11	11	Binil Benny	A Study On Brand Switching Behaviour Of Customers Among Shampoo Brands	Dr. Anish John A
12	12	Boney Jaison	A Study on The Impact on Organizational Support On Employee Satisfaction with Special Reference To Guardian Controls Limited	Dr.Anjali John
13	13	Deepika Rose Bosco	Study On Impact of Organisation Culture On Employee Retention In Reliance Trends	Ms. Riya Susan Skaria
14	14	Elias Titty Zacharia	Implementation of HR Policies And Its Effeteness" At Mantle Solutions Pvt Ltd	Mr. Sebin Joseph
15	15	Elizabeth Mary	Study On Employee Welfare Activities On Employee Satisfaction In Mary Matha Constructions Pvt. Ltd	Dr.Anjali John
16	16	George Augustine	Comparative Study On Customer Satisfaction Towards Bharti Airtel And Reliance Jio With Reference To Ernakulam District	Ms. Riya Susan Skaria



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Sl.No.	Group No.	Name	Topic	Guide
17	17	Harishankar Parameswaran	A Study On Impact of Foreign Institutional Investment in Indian Stock Market with Special Reference To Bank Nifty Index	Dr. Jose Mamman
18	18	J Kishan Raj	A Study On Quality of Work Life With Special Reference To Manufacturing Industry	Ms. Riya Susan Skaria
19	19	Jewel Jacob	A Study On Packaging of Product Towards Consumer Buying Behaviour In Ernakulam District	Dr. Jose Mamman
20	20	Johns Leo	A Study On Human Resources Management Practices And Its Effects On Employee Commitment In FMCG Industry	Dr. Anjali John
21	21	Joseph Rajan	A Study On Impact of Employee Engagement On Employee Job Satisfaction In St. George Hospital Vazhakulam	Ms. Merrin Geordie Pottas
22	22	Joyal Jose,	A Study On Effectiveness Of Advertising And Brand Preference Of Eastern Curry Powder	Mr. Sebin Joseph
23	23	Lydia Adams Kurian	A Study On the Effectiveness of Online Learning Among College Students with Special Reference to Muvattupuzha Taluk	Dr. Jose Mamman
24	24	Mariya T S,	A Study On The Financial Performance And Cash Management Of Bestonne Granites And Metals Private Limited, Palakkad	Mr. Sebin Joseph
25	25	Martin Mathew	A Study On Company's Promotion Strategies And Its Effect On Dealer Satisfaction Towards Toms Pipes Pvt Ltd	Dr. Anish John A
26	26	Mehna Ibrahim	Study On Effectiveness of Training and Development of Employees with Reference to Metrolla Steels Limited	Dr. Anish John A
27	27	Melba Sajan	Impact Of Absenteeism On Job Satisfaction A Study With Special Reference To MBMM Hospital	Dr. Anjali John
28	28	Naiideep S	A Study On Role of Human Resource Development in Improving Organizational Performance with Special Reference to PDPCS, Kalady	Dr. Jose Mamman
29	29	Nikitha Vincent	A Study On Youth Customer Satisfaction of Decathlon Products with Special Reference to Decathlon Whitefield	Ms. Merrin Geordie Pottas
30	30	Riya Saju	A Study On Changes In Online Banking In India Before And After Covid 19 With Special Reference To Nationalised Banks	Dr. Jose Mamman
31	31	Vishnu Shiju	A Study On Welfare Resources Of Women Employees In MOSC Hospital	Ms. Merrin Geordie Pottas



Principal
VISWAJYOTHI COLLEGE OF
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VAZHAKULAM

DEPARTMENT OF MANAGEMENT STUDIES
VISWAJYOTHI COLLEGE OF ENGINEERING AND
TECHNOLOGY, VAZHAKULAM



CERTIFICATE

I certify that the report titled "A STUDY ON THE QUALITY OF WORK LIFE OF EMPLOYEES IN IT INDUSTRY" presented by Ms. Aghila K B, VJC21MBA02, to APJ Abdul Kalam Technological University, as part of the requirements for the degree of Master of Business Administration, is an authentic and genuine representation of the project work conducted by Ms. Aghila K B under my guidance and supervision. This report has not been submitted in any form to any other university or institute for the purpose of obtaining any degree, diploma, or similar qualification

Dr. Anish John A

Assistant Professor



Mr. Somy P Mathew

Vice Principal & HOD in charge

*Verified
Anasthony
11/7/23*



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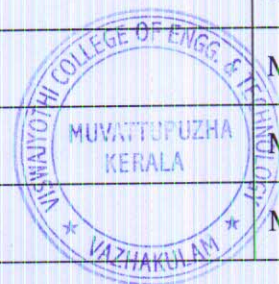
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Department of Artificial Intelligence and Data Science Mini Project (2020-24 Batch)

Sl.No.	Group No	Name	Topic	Guide
1	1	Abin Antony	Deep Dash	Ms. Sneha Benny
2	1	Allen Antony	Deep Dash	Ms. Sneha Benny
3	1	Christo Vincent	Deep Dash	Ms. Sneha Benny
4	2	Aby Johny	Hand Sign Recognition System	Ms. Sneha Benny
5	2	Amithrajith V	Hand Sign Recognition System	Ms. Sneha Benny
6	2	Jom Sebastian	Hand Sign Recognition System	Ms. Sneha Benny
7	2	Tony John Jose	Hand Sign Recognition System	Ms. Sneha Benny
8	3	Alby Benny	Rodent Activity Monitoring System	Dr. Sony Kurian, Dr. Anitta Brigit Mathew
9	3	Alwin P Jose	Rodent Activity Monitoring System	Dr. Sony Kurian, Dr. Anitta Brigit Mathew
10	3	Athul Asok	Rodent Activity Monitoring System	Dr. Sony Kurian, Dr. Anitta Brigit Mathew
11	3	Navaneeth V Nair	Rodent Activity Monitoring System	Dr. Sony Kurian, Dr. Anitta Brigit Mathew
12	4	Ann Mariya Kurian	Brain Tumor Detection	Dr. Melvin C Jose
13	4	Gopika Biju	Brain Tumor Detection	Dr. Melvin C Jose
14	4	Mikhela Theres Sabu Mathew	Brain Tumor Detection	Dr. Melvin C Jose
15	4	Sruthi Chandran	Brain Tumor Detection	Dr. Melvin C Jose
16	5	Ardhra Ann Denny	Alzheimer's Disease Detection	Mr. Sivadas T Nair
17	5	Jeevika Sojan	Alzheimer's Disease Detection	Mr. Sivadas T Nair
18	5	Reethu George	Alzheimer's Disease Detection	Mr. Sivadas T Nair
19	5	Sandra Theresa Mathew	Alzheimer's Disease Detection	Mr. Sivadas T Nair





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Sl.No.	Group No	Name	Topic	Guide
20	6	Abishek Ravi	Automated Gaming	Ms. Geethu Gopan
21	6	Ameer P Ibrahim	Automated Gaming	Ms. Geethu Gopan
22	6	Joseph Vincent	Automated Gaming	Ms. Geethu Gopan
23	6	Mohammed Hansif	Automated Gaming	Ms. Geethu Gopan
24	7	Jagath Jayachandran	AIM-SUNIL	Dr. Anitta Brigit Mathew
25	7	Rahul Praveen	AIM-SUNIL	Dr. Anitta Brigit Mathew
26	8	Aksa Ann Glemin	Fire Detection Using Computer Vision	Ms. Renjani, Dr. Anitta Brigit Mathew
27	8	Greeshma Reji	Fire Detection Using Computer Vision	Ms. Renjani, Dr. Anitta Brigit Mathew
28	8	Nivya Vineeth	Fire Detection Using Computer Vision	Ms. Renjani, Dr. Anitta Brigit Mathew
29	8	Sarafin Babu	Fire Detection Using Computer Vision	Ms. Renjani, Dr. Anitta Brigit Mathew
30	9	Adhila Beegum	Drowsiness Detection System	Ms. Mary Nirmala
31	9	Anjaly.K.Vinod	Drowsiness Detection System	Ms. Mary Nirmala
32	9	Athira Susan Sabu	Drowsiness Detection System	Ms. Mary Nirmala
33	9	Nova Emmanuel	Drowsiness Detection System	Ms. Mary Nirmala
34	10	Athul S	Automated Presentation Maker	Ms. Femy John
35	10	Nihal Thomas	Automated Presentation Maker	Ms. Femy John
36	10	Rex Jaison	Automated Presentation Maker	Ms. Femy John
37	11	Bharat N	Doctor Recommendation System Using Symptoms	Dr. Anitta Brigit Mathew
38	11	Kevin Tom Sajeer	Doctor Recommendation System Using Symptoms	Dr. Anitta Brigit Mathew
39	11	Georgekutty Jose	Doctor Recommendation System Using Symptoms	Dr. Anitta Brigit Mathew





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Sl.No.	Group No	Name	Topic	Guide
40	12	Aswin V A	RFID Bus Ticketing System	Ms. Sneha Benny
41	12	Joel Punnassery	RFID Bus Ticketing System	Ms. Sneha Benny
42	12	Ananthakrishna D S	RFID Bus Ticketing System	Ms. Sneha Benny
43	12	Denil George	RFID Bus Ticketing System	Ms. Sneha Benny



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**VISWAJYOTHI COLLEGE OF ENGINEERING AND
TECHNOLOGY, VAZHAKULAM**

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE



BONAFIDE CERTIFICATE

This is to certify that the mini project report entitled “**ALZHEIMER’S DISEASE DETECTION**” is a bonafide record of the project presented by **ARDHRA ANN DENNY (VJC20AD014), JEEVIKA SOJAN (VJC20AD027), REETHU GEORGE (VJC20AD039), SANDRA THERESA MATHEW (VJC20AD042)** in partial fulfillment of the requirements for the award of the **Degree of Bachelor of Technology in Artificial Intelligence and Data Science** of APJ Abdul Kalam Technological University.

for Sneha
7/8/23
Internal Supervisor

AD
9/8/23
Project Co-Ordinator



K. Gan
External Supervisor

[Signature]
Head of the Department





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Department of Computer Science and Engineering Mini Project (2020-24 A Batch)

Sl.No.	Group No	Name	Topic	Guide Name
1	1	Ian Antony	G Fit	Mr.Amel Austine
2	1	Ruben Manoj	G Fit	Mr.Amel Austine
3	1	Abhijith Rajesh	G Fit	Mr.Amel Austine
4	1	Joseph Peter	G Fit	Mr.Amel Austine
5	2	Varun Mohammed	MUSN Art	Mrs.Mayadevi P A
6	2	K A Muhammed	MUSN Art	Mrs.Mayadevi P A
7	2	Abel Binoy	MUSN Art	Mrs.Mayadevi P A
8	2	Farseen	MUSN Art	Mrs.Mayadevi P A
9	3	Gadha Ashok	Tailoring management System	Mrs.Neenu Daniel
10	3	Nehala Kassim	Tailoring management System	Mrs.Neenu Daniel
11	4	Gopika Byju	Crime Record System	Mrs.Sabitha Raju
12	4	Anns K James	Crime Record System	Mrs.Sabitha Raju
13	4	Mariya P B	Crime Record System	Mrs.Sabitha Raju
14	5	George Geo	Domestic service website	Mrs.Dona Jose
15	5	Aashuthosh S	Domestic service website	Mrs.Dona Jose
16	5	Anandhu S	Domestic service website	Mrs.Dona Jose
17	5	Cristin Siljo	Domestic service website	Mrs.Dona Jose
18	6	Sajin Sabu	Vocalize Text to speech Conversion	Mrs.Dona Jose
19	6	Arjun Anil	Vocalize Text to speech Conversion	Mrs.Bency Cleetus
20	6	Aditya Anil	Vocalize Text to speech Conversion	Mrs.Bency Cleetus
21	6	Davis Sebastian	Vocalize Text to speech Conversion	Mrs.Bency Cleetus
22	7	Alvin Saju	Trip planner	Mrs. Anu Jose
23	7	Anto S Illickal	Trip planner	Mrs. Anu Jose
24	7	Sharath Sivakumar	Trip planner	Mrs. Anu Jose
25	7	Abhinav P George	Trip planner	Mrs. Anu Jose
26	8	Samuel Joseph	Emergency SOS System	Mrs.Cinita Mary Mathew
27	8	Melvin Biju	Emergency SOS System	Mrs.Cinita Mary Mathew
28	8	Fahad	Emergency SOS System	Mrs.Cinita Mary Mathew
29	8	Sohit	Emergency SOS System	Mrs.Cinita Mary Mathew
30	9	Pranav Pramod	Expense Tracker with machine learning	Mrs.Asha Joseph
31	9	Joel Jose	Expense Tracker with machine learning	Mrs.Asha Joseph
32	9	Martin Antony	Expense Tracker with machine learning	Mrs.Asha Joseph



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	Group No	Name	Topic	Guide Name
33	10	Gayatri P G	Depression Detection System	Mrs.Anju Markose
34	10	Geethukrishna T S	Depression Detection System	Mrs.Anju Markose
35	10	Serene John	Depression Detection System	Mrs.Anju Markose
36	10	Sajitha Francis	Depression Detection System	Mrs.Anju Markose
37	11	Amala John	Food Recipe Suggestion System Based on an ingredient	Mrs.Lakshmi Suresh
38	11	Liya Mariya Abraham	Food Recipe Suggestion System Based on an ingredient	Mrs.Lakshmi Suresh
39	11	Misty Sunny	Food Recipe Suggestion System Based on an ingredient	Mrs.Lakshmi Suresh
40	11	Theresa Polychan	Food Recipe Suggestion System Based on an ingredient	Mrs.Lakshmi Suresh
41	13	Sidharth S	Morse Code Translator	Mrs.Lithiya Sara Babu
42	13	Christo Robinson	Morse Code Translator	Mrs.Lithiya Sara Babu
43	13	Varghese P Joseph	Morse Code Translator	Mrs.Lithiya Sara Babu
44	14	Lekshmi Priya C M	Patient Monitoring System	Mrs.Remya Jose
45	14	Aysha Nazrin Afsal	Patient Monitoring System	Mrs.Remya Jose
46	14	Anna Prize Johney	Patient Monitoring System	Mrs.Remya Jose
47	15	Krishna Renjith	Student attendance system using face recognition	Mrs.Libsy Ann Merin Baby
48	15	Lijumon A P	Student attendance system using face recognition	Mrs.Libsy Ann Merin Baby
49	15	Anand Vishnu K V	Student attendance system using face recognition	Mrs.Libsy Ann Merin Baby
50	15	Jerin Joseph	Student attendance system using face recognition	Mrs.Libsy Ann Merin Baby
51	16	Emlin Maria Roy	Multi salon system	Mrs.Nimmy George
52	16	Diya Xavier	Multi salon system	Mrs.Nimmy George
53	16	Grace John	Multi salon system	Mrs.Nimmy George
54	16	Sona Sunny	Multi salon system	Mrs.Nimmy George



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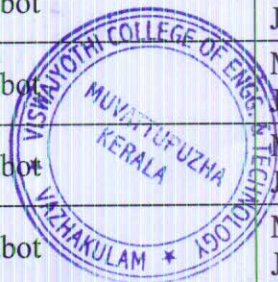
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Department of Computer Science and Engineering Mini Project (2020-24 B Batch)

Sl.No.	Group No	Name	Topic	Guide Name
1	1	Adarsh Binoy Joseph	Voting System using Blockchain	Dr. S. P. Predeep Kumar
2	1	Abel Mathew Xavier	Voting System using Blockchain	Dr. S. P. Predeep Kumar
3	1	James Antony Paul	Voting System using Blockchain	Dr. S. P. Predeep Kumar
4	2	Alex Sebin	Scrap Dealing System	Ms. Ritty Jacob / Ms Anju T
5	2	R Jayakrishnan	Scrap Dealing System	Ms. Ritty Jacob / Ms Anju T
6	2	Joel George Toine	Scrap Dealing System	Ms. Ritty Jacob / Ms Anju T
7	2	Abin Thomas	Scrap Dealing System	Ms. Ritty Jacob / Ms Anju T
8	3	Alvin Chackochan	DairyDash - An E-Commerce Platform for milk Merchandise	Mr. Andrews Jose
9	3	Ariane Vincent C	DairyDash - An E-Commerce Platform for milk Merchandise	Mr. Andrews Jose
10	3	Jobal Varghese	DairyDash - An E-Commerce Platform for milk Merchandise	Mr. Andrews Jose
11	3	Donjo Danty	DairyDash - An E-Commerce Platform for milk Merchandise	Mr. Andrews Jose
12	4	Ananya S	Campus Voting System using Face Recognition	Ms. Arsha J K
13	4	Eeva E P	Campus Voting System using Face Recognition	Ms. Arsha J K
14	4	Gopika Shine	Campus Voting System using Face Recognition	Ms. Arsha J K
15	4	Abhaya Pathrose	Campus Voting System using Face Recognition	Ms. Arsha J K
16	5	Arjith Gurudas	College Enquiry Chatbot	Mr. Joe Mathew Jacob
17	5	Lino Saji	College Enquiry Chatbot	Mr. Joe Mathew Jacob
18	5	Harshavardhan Dhinu	College Enquiry Chatbot	Mr. Joe Mathew Jacob
19	5	Edwin Roy	College Enquiry Chatbot	Mr. Joe Mathew Jacob
20	6	Aswathy Murali	Canteen Automation System	Ms. Remya Paul





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Sl.No.	Group No	Name	Topic	Guide Name
21	6	Norah Jomon	Canteen Automation System	Ms. Remya Paul
22	6	Renjima Reji	Canteen Automation System	Ms. Remya Paul
23	6	Gishna Biju	Canteen Automation System	Ms. Remya Paul
24	7	David D M	Managing Expiring Inventory	Ms. Nimmy George
25	7	Joice Mathew	Managing Expiring Inventory	Ms. Nimmy George
26	7	Tom Alex	Managing Expiring Inventory	Ms. Nimmy George
27	7	Joyel Sani Peedikayil	Managing Expiring Inventory	Ms. Nimmy George
28	8	Devika S Dev	Twitter Sentiment Analysis	Ms. Lakshmi Suresh
29	8	Ann Anna Aby	Twitter Sentiment Analysis	Ms. Lakshmi Suresh
30	8	Aliya Ashraf	Twitter Sentiment Analysis	Ms. Lakshmi Suresh
31	8	Rithu Babu	Twitter Sentiment Analysis	Ms. Lakshmi Suresh
32	9	Emmanuel Jose	Leaf-Doc : A Plant Disease Detection System	Ms. Ierin Babu
33	9	Allan T Jose	Leaf-Doc : A Plant Disease Detection System	Ms. Ierin Babu
34	9	Arun Jibi	Leaf-Doc : A Plant Disease Detection System	Ms. Ierin Babu
35	9	Adarsh Jin	Leaf-Doc : A Plant Disease Detection System	Ms. Ierin Babu
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38	10	Noya Mathew	Image Forgery Detection	Ms. Sona Baby
39	10	Megha Sara Paul	Image Forgery Detection	Ms. Sona Baby
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41	11	Vishnu S	Diet dashboard	Ms. Libsy Ann Merin Baby





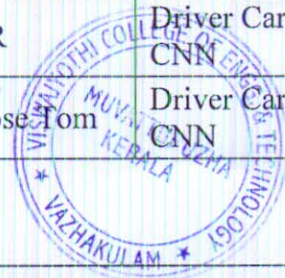
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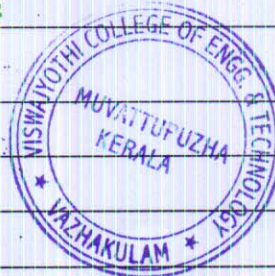


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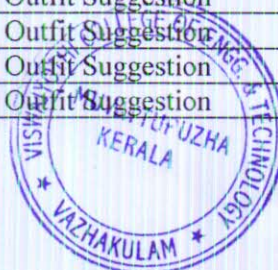
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ELECTRIC VEHICLE OPERATING ON SOLAR ENERGY

PROJECT REPORT- PHASE 2

Submitted By,

ANAKHA VENUGOPAL (VJC19EE008)

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In partial fulfillment for the award of the degree of

**BACHELOR OF TECHNOLOGY IN ELECTRICAL AND
ELECTRONICS ENGINEERING**



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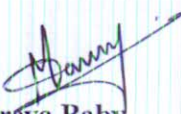
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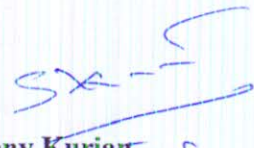
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Project Coordinator


Mr. Babu T Chacko

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Dr. Sony Kurian

Head of the Department



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1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design / development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to ones own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning :** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change



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Our Graduates shall have:

1. Foundation in mathematical, analytical and scientific skills to design technically and economically viable engineering solutions.
2. Culture and attitude of team work, to help in upbringing socially committed Entrepreneurs engaged in lifelong learning.
3. Professional communication skills, social values and work ethics.

PROGRAM SPECIFIC OUTCOMES

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1. Ability to apply fundamentals of Engineering in analyzing multidisciplinary issues, developing solutions with professional and ethical responsibilities, and promoting conventional and unconventional methods for higher research.
2. Ability to apply Electrical Engineering knowledge to perform Circuit analysis, troubleshoot Electrical machines and optimize Power Systems designs by incorporating analog and digital controls.

ACKNOWLEDGEMENT

We take this opportunity to express our deep sense of gratitude and sincere thanks all who helped me to complete this work successfully. Our first and foremost thanks go to **THE GOD ALMIGHTY** who showered his immense blessings on our effort.

We express our sincere thanks to our Principal **Dr. K.K .RAJAN** for his kind cooperation in all aspects of our design project.

We are very grateful to, **Dr. SONY KURIAN**, Head of the department of Electrical and Electronics Engineering, and for helping us to take up this venture and for fostering the excellent academic climate in the department.

We extend our sincere thanks to **Ms. SMITHA JACOB**, Assistant professor, and **Ms. MEREYA BABY**, Assistant professor, Department of Electrical and Electronics Engineering for their motivation and constant encouragement.

It is with pleasure and deep sense of gratitude that we acknowledge here the invaluable guidance given by **Mr. BABU T CHACKO**, Assistant Professor, Department of Electrical and Electronics Engineering. Without his guidance we would not have been able to complete this design project successfully. Also we would like to express our gratitude for his guidance and valuable suggestions and encouragement in this topic.

We would also thankful to all staff of Department of Electrical and Electronics Engineering for their help and support. We indebted to all others, who were constantly suggesting better way to process work.

ANAKHA VENUGOPAL

GEORGE VARGHESE

GEO WILSON

JYOTHIKA GEORGE

ABTRACT

In the current automotive market, the demand for electric vehicles has skyrocketed due to factors including rising fuel prices, pollution, and their great efficiency. Yet, we cannot claim that electric vehicles are completely environmentally benign when taking into account about our primary energy source, which is thermal energy. The aforementioned problems will be mitigated by electric vehicles that are powered by a renewable energy source. Our project is to prototype an electric vehicle which is powered by solar energy. We use a 17V solar panel with a 12V charge controller to charge a 12V battery. It also has a provision to charge the battery from AC supply. Our suggested design will guarantee excellent efficiency, no fuel expense, and minimal contribution towards pollution. The circuit is designed in such a way that it can charge the vehicle only when the vehicle is in a standstill condition and the operating speed of the vehicle is low which can be rectified in future.

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CHAPTER 1

INTRODUCTION

As modern society and technology advances, more and more people around the world are becoming concerned about the effects of global warming and irreversible climate change. Worldwide efforts are being made to significantly reduce CO₂ emissions as well as other dangerous environmental pollutants. Automobiles, which are almost exclusively powered by internal combustion engines and emit harmful pollutants, are among the most famous generators of these pollutants. According to various reports, cars and trucks are said to be responsible for roughly 25% of CO₂ emissions, with other significant modes of transportation making up the remaining 12%.

Pure combustion engines are increasingly being held responsible for global warming due to the huge number of cars on the road today. Electric vehicles are considered to be a potential remedy for this. In India, conventional (thermal, nuclear, and hydro) and renewable sources are used to produce electricity (Wind, Solar, Biomass etc.). Even though, the majority of electricity is produced by coal-fired thermal power plants, which provide about 75% of over all electricity.

Acid rain, smog, ground-level ozone, and particle emissions are all effects of utilizing coal as a source of electricity. Burning coal and fuel oil releases fly ash particles into the atmosphere, adding to the problem of air pollution. Due to the operation of coal mining, both surface water and groundwater are becoming polluted. The surface water quality of the mining zones is first being harmed by the emission of unsavory substances like ash, oil, phosphorus, ammonia, urea, and acids.

It is not possible to classify an electric car as eco-friendly if its battery got charged using grid electricity or by any other non-renewable energy source. This issue can be resolved by adopting a renewable energy source to power the electric vehicle's battery. Eco-friendly vehicles are presently experiencing global opportunities due to the rapid technological advancement in the fields of electric vehicles and renewable energy. One of the most popularly used natural resources is solar energy. Many researchers have suggested various ways to charge an electric vehicle with solar energy. Like solar-powered homes, solar cars harness energy from the sun by converting it into electricity. This electricity fuels the battery that runs the car's motor. Instead of using a battery, some solar cars direct the power straight to an electric motor. On a bright, sunny day, the sun's rays

give off approximately 1,000 watts of energy per square meter of the planet's surface. If we could collect all of that energy, we could easily power our homes and offices for free.

Solar power is the term for using the sun's energy to power a device or an electrical system. Solar panels are made up of a grid of solar cells. These cells collect the sun's energy and convert it into electrical energy. Photovoltaic cells are made of special materials called semiconductors such as silicon, which is currently used most commonly. When light strikes the cell, a certain portion of it is absorbed within the semiconductor material. This means that the energy of the absorbed light is transferred to the semiconductor. The energy knocks electrons loose, allowing them to flow freely. PV cells also all have one or more electric field that acts to force electrons freed by light absorption to flow in a certain direction. This flow of electrons is a current, and by placing metal contacts on the top and bottom of the PV cell, we can draw that current off for external use.

Our project is to prototype an electric vehicle which is powered by solar energy. We use a 17V solar panel with a 12V charge controller to charge a 12V battery. It also has a provision to charge the battery from AC supply. Our suggested design will guarantee excellent efficiency, no fuel expense, and minimal contribution towards pollution. The circuit is designed in such a way that it can charge the vehicle only when the vehicle is in a standstill condition and the operating speed of the vehicle is low which can be rectified in future.

CHAPTER 2

COMPONENTS REQUIRED

2.1 SOLAR PANEL

Using the photovoltaic effect, solar panels produce power. The phenomenon known as the photovoltaic effect occurs when an object produces an electromotive force as a result of absorbing photons. When sunlight or other light strikes a semiconductor's PN junction, the photovoltaic effect takes place.



Figure 2.11: Solar panel

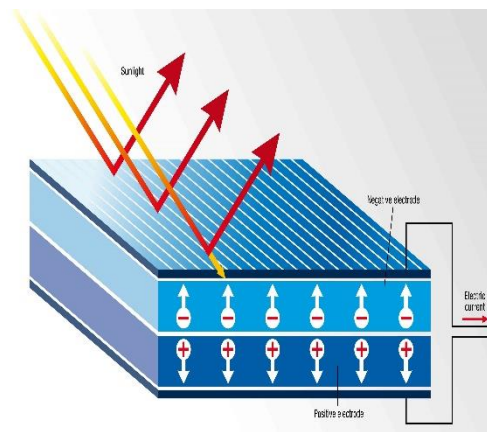


Figure 2.12 :Internal diagram of Solar panel

Specifications of solar panel used in our project is given below.

- Made of polycrystalline material
- Voltage: 17.7 V
- Current: 2.83 A
- Max Power: 50 W

2.2 RS570 DC MOTOR

A current-carrying conductor produces torque and a tendency to move when kept in a magnetic field. In essence, a mechanical force develops when electric and magnetic fields interact. The operation of DC motors is based on this theory.



Figure 2.21: RS570DC motor

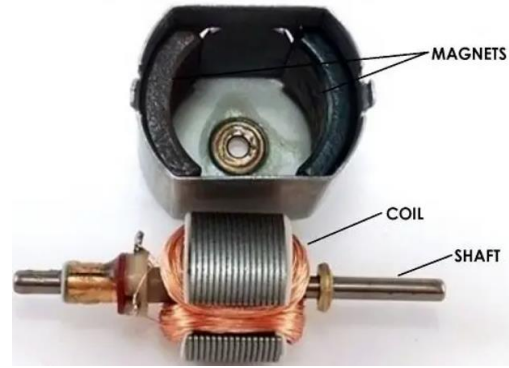


Figure 2.22: Internal diagram of DC Motor

The vehicle is driven by two 1A RS570 DC motors with high torque. One is on the back wheel, while the other is in the steering. Two motors are attached to a drive. The servo's internal gears convert the output while rotating more slowly and with greater torque

Specifications of RS570 DC motor used for our project is given below.

- Voltage: 12 V
- Current: 1 A
- Power: 65 W
- Speed :35000 RPM

2.3 BATTERY

The motor is powered by a 12V 15.6Watt rechargeable lead acid battery. The charging and discharging of a lead acid battery involves a significant amount of chemical activity. When sulfuric acid dissolves, the H_2SO_4 molecules split into two separate molecules. Positive ions like $2H^+$ and negative ions like SO_4^- will be produced. Anode and Cathode, two electrodes, are joined as plates. The cathode draws the positive ions while the anode captures the negative ions. This connection between the anode, SO_4^- , and cathode with $2H^+$ exchanges electrons. Vehicles and other applications that need for large loads of current frequently employ lead acid batteries. Low capital costs, technological maturity, and effective recycling, easy manufacture and also good performance at low and high temperatures are some key advantage. Specifications of our battery is given below.

- Voltage: 12V
- Capacity: 1.3Ah
- Rechargeable



Figure 2.31: Battery

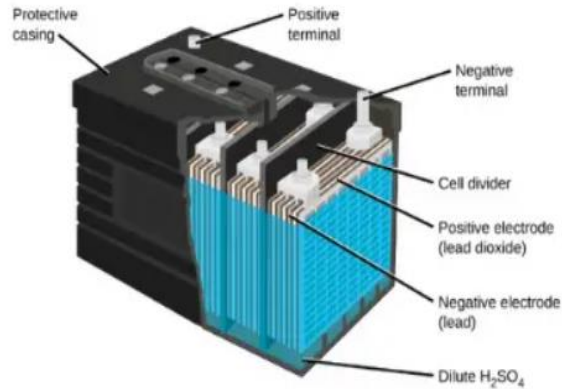


Figure 2.32: Internal diagram of battery

2.4 PWM

When the batteries are fully charged, the solar charge controller gets involved to control the current flow to the batteries, slowing it down and then gradually ceasing it. The solar charge controller will then permit the required current to restart charging as the batteries are used. The power from the 17V solar panel is controlled by a PWM charge controller of 12V.



Figure 2.41: PWM



Figure 2.42: Internal diagram of PWM

Specifications of our PWM are given below.

- Voltage: 12 V
- Max. Solar Input: 25 V

2.5 RECEIVER

The receiver is connected to the battery and both motors for control. Receiver is an electronic device that captures and regulates the electrical energy sent to the motor. The receiver modifies the amount and frequency of energy fed to the motor, which indirectly controls the motor's speed and torque.

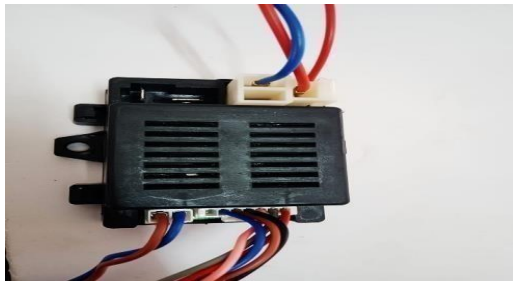


Figure 2.51: Receiver

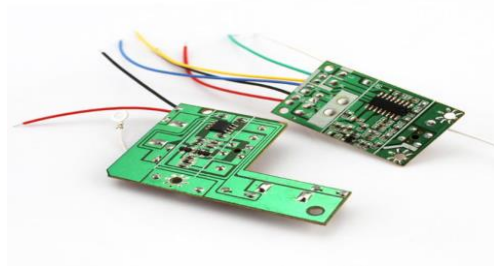


Figure 2.52: Internal diagram of receiver

Specification of the receiver is given below.

- Receiver HH701K
- 5 pin
- 12V
- 2.45GHz

2.6 AC CHARGING PORT

An AC charging port is provided to charge the battery using external AC supply.



Figure 2.6: AC charging Port

2.7 RELAY

Relays will turn the batteries ON and OFF based on the instructions of the BMS while also turning external chargers ON and OFF.



Figure: 2.71: Relay

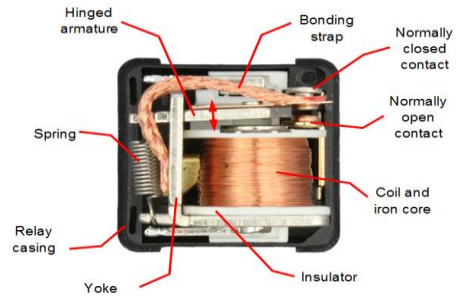


Figure: 2.72: Internal diagram of relay

Specification of the relay is given below

- 10A
- 125/250V AC,

2.8 GEAR BOX

Two JRR 570 gear boxes are provided for power transmission. They are coupled with motor.



Figure 2.81: JRR570 Gear box



Figure 2.82: Internal diagram gear box

Specifications are given below

- Voltage: 12V
- Power: 65W
- Speed: 35000RPM.

2.9 REMOTE CONTROLLER

Vehicle can be controlled by HH670K Bluetooth remote controller of 2.4 GHz.



Figure 2.91: Remote controller



Figure 2.92: Internal diagram of remote controller

CHAPTER 3

SOLAR POWERED ELECTRIC VEHICLE

Unlike a traditional gas-powered internal combustion engine (ICE), an electric vehicle (EV) doesn't need to burn fuel to produce the energy needed for driving it. Instead, they propel the vehicle forward by turning an electric motor (or motors) attached to the wheels using electrical energy stored in their battery packs. As a result, even though they now have a greater initial cost, EVs often require less maintenance than gas-powered vehicles and have fewer moving components. There are different types of vehicles that could qualify as EVs, a spectrum of cars from plug-in hybrids with small supplemental batteries to entirely electric, battery-powered vehicles, and even hydrogen fuel cell-powered cars.

Our proposed project is an electric car which is powered by solar energy. Solar panel is fixed on the roof of the car. Solar energy systems either use photovoltaic (PV) panels or mirrors to focus solar radiation to convert sunlight into electrical energy. The amount of solar radiation that reaches any given area on the Earth's surface fluctuates, even though every location receives some sunshine during the course of a year. This radiation is captured by solar technology, which transforms it into useful energy. Solar energy technologies primarily fall into two categories: photovoltaics (PV) and concentrated solar thermal power (CSP).

In photovoltaics system solar panels collect energy from the sun's rays as they hit them through their PV cells. With the help of an internal electrical field within the cell, this energy generates electrical charges that move, which in turn causes electricity to flow. CSP (concentrating solar-thermal power) systems employ mirrors to reflect and concentrate sunlight onto receivers that collect solar energy and convert it to heat, which may then be used to generate electricity or stored for later use.

3.1 BLOCK DIAGRAM OF PROPOSED MODEL

Electricity produced using the solar panel is given to the charge controller. The charge controller is connected to battery and also to an AC to DC converter which is used to convert the AC power from AC charging port to DC.

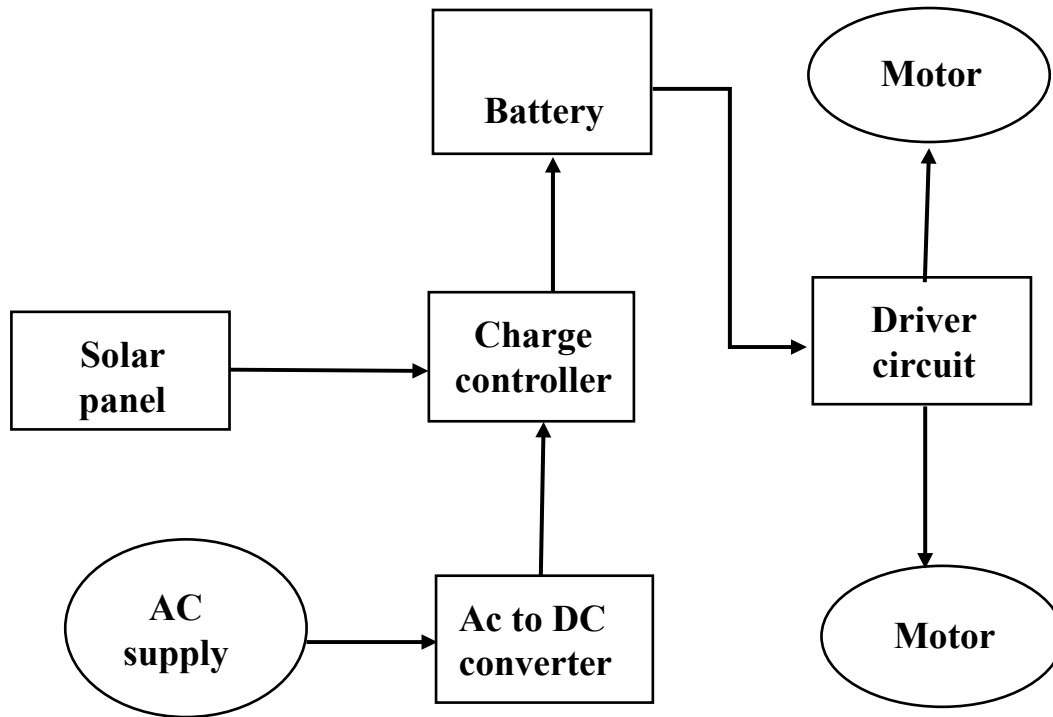


Figure 3.1: Block diagram of proposed model

3.2 WORKING

Our proposed model has two DC motors which are fixed to the front and rear wheels, respectively. While the back wheel motor only needs to run in accordance with the front wheel, the front wheel motor's primary responsibility is to drive and steer the vehicle. An additional port to charge the battery from an AC supply. The receiver used in this project has 5 pins which are connected to different parts of the vehicle. Two pins are connected to the front and back wheels respectively. One pin is connected to the AC charging port and one is connected to the battery. Fifth pin is connected to the relay. This remote sensing device is connected to a switch that starts the car. To discharge the battery and start the motors, a connection is made from this remote sensing device to the battery. Electricity is produced using a 17V solar panel is controlled by 12 V PWM. The controlled output of PWM is given to a 12V lead acid battery and given to the motor which are coupled with the gear box to run the vehicle. The battery is connected to the wheel through a receiver. The car is switched to charging mode when it is at rest. The AC supply is converted to DC and stored in the battery.

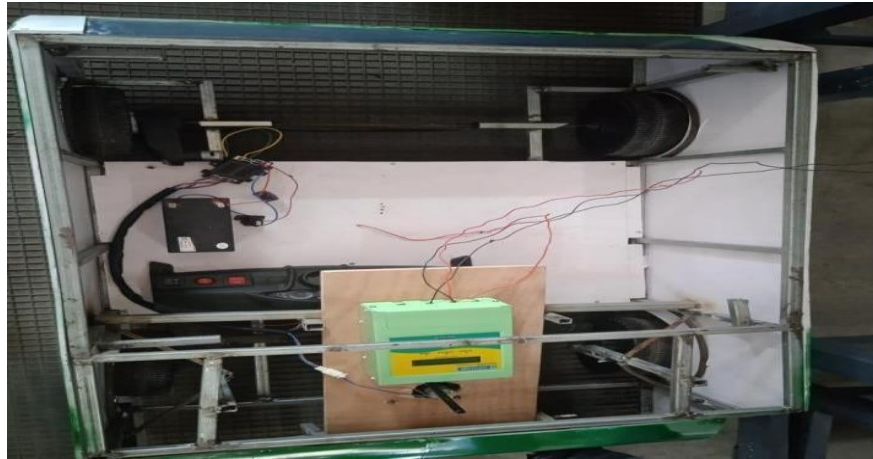


Figure 3.21: Internal circuit of proposed model



Figure 3.22: Proposed model

CHAPTER 4

ADVANTAGES, DISADVANTAGES AND APPLICATIONS OF SOLAR POWERED ELECTRIC VEHICLE

4.1 ADVANTAGES

The following are the main merits of solar powered electric vehicle:

- Cost effectiveness
- Eco friendly.
- Ability to harness solar energy to its full potential.
- Absence of carbon emission.
- Fossil fuel-free vehicle.
- Reduces noise pollution as Solar cars are noiseless.
- Drastic reduction of air pollution.
- Abundance and infinite availability of the free resource.
- Preservation of the residual fossil fuel that is on verge of extinction.
- Gasoline free vehicle.
- Low maintenance with a longer life span value of the motor.

4.2 DISADVANTAGES

The following are the main merits of solar powered electric vehicle:

- High initial installation cost.
- Limited surface area for installing solar cells in a vehicle.
- No solar power at night, a big battery bank is required.
- Solar panels are yet to reach their maximum utilization and hence are less efficient.
- Solar vehicles take hours in recharging batteries.
- Recharging is possible only in standstill condition.
- This idea is not practically possible in countries like Greenland since it receives least amount of sunlight.

4.3 APPLICATIONS

Solar cars have a wide application range that includes:

- Commercialized four-wheel drives.
- Lightweight vehicle.
- Usable in areas where fuel-based vehicles are not permitted

4.4 FUTURE SCOPE

Further studies about this model would overcome all its existing drawbacks. Following are the expected future improvement of solar powered electric vehicle:

- Currently, simultaneous charging and discharging are not feasible hopefully, this limitation will be removed in the future.
- Potential for increasing the surface area for solar cell installation, or a design change like wings that open up when parked.
- Creation of lighter and more powerful batteries.
- More powerful and efficient solar cell design.

CHAPTER 5

COST ANALYSIS

5.1 COST ANALYSIS OF DIFFERENT VEHICLES

Cost analysis of different vehicles available in the market are listed below

5.11 GASOLINE VEHICLES

In India starting price of IC engine car is about Rs 2.63 Lakh. The most popular Petrol cars are Mahindra Thar (Rs. 13.17 - 15.53 Lakh), Mahindra XUV700 (Rs. 12.95 - 23.79 Lakh), Tata Punch (Rs. 5.49 - 9.08 Lakh). These vehicles are fueled by petrol which costs about 107 per liter and is increasing every day. Average mileage of petrol or diesel engine cars in India is about 15 kmpl and 17 kmpl respectively. Running cost of diesel and petrol vehicle is Rs 9.50 and Rs 4.93 respectively.

5.12 CNG VEHICLES

There are 28 CNG cars currently available in India for sale at starting price Rs 3.61 Lakh. The most popular CNG cars are Maruti Brezza (Rs. 8.29 - 14.14 Lakh), Maruti Swift (Rs. 5.99 - 9.03 Lakh), Maruti Ertiga (Rs. 8.64 - 13.08 Lakh). Current cost of CNG is 85 per kg. In the case of CNG, the average mileage becomes around 25-30 kmpl. The running cost of CNG car is 2.5 to Rs 2.60 per km. CNG is still a fossil fuel and therefore a non-renewable resource. CNG has a lower power yield.

5.13 HYBRID VEHICLES

In 2023, there are 15 Hybrid cars available in India. Some of the popular hybrid cars are Lexus RX, Honda City Hybrid eHEV, Toyota Urban Cruiser Hyryder, Maruti Suzuki Grand Vitara, Toyota Innova Hycross. Toyota Urban Cruiser Hyryder is the cheapest Hybrid car in India. The on-road price of Toyota Urban Cruiser Hyryder starts at ₹ 16.21 Lakh. The most expensive Hybrid car in India is Porsche Panamera whose on-road price starts at ₹ 2.73 Crore. Hybrid are the most gasoline efficient of all cars they typically get 48 to 60 mpg. Running cost of hybrid Rs 5 per km. Some of the drawbacks of hybrid vehicles are higher upfront costs and maintenance can be expensive.

5.14 ELECTRIC VEHICLES

Some of the popular battery-powered cars include the MG Comet EV (Rs. 7.98 Lakh), Tata Tiago EV (Rs.8.69 Lakh) and Mahindra XUV400 (Rs.15.99Lakh). According to the current electric car prices in India, these lie in the range of 7.98 Lakh to 1.95 Crore. While some electric vehicles can

be on the pricier side, there are also plenty of affordable options available, such as MG Comet EV, which is the cheapest electric car in India. The electric car price in India for the upcoming Tata Altro EV is estimated to be between Rs. Rs. 12.00 - 15.00 Lakh. An electric car would have a running cost of Rs 1.2-1.4 per km. Less availability of charging station and high initial cost is concern.

5.15 SOLAR POWERED ELECTRIC VEHICLES

Estimate cost of a commercial solar powered electric vehicle by Tesla is about 91lakhs in Indian rupees. They use just 3.25 kWh/100 km. Running cost of this vehicles will be less than that of electric vehicles. But solar panel efficiency and initial cost is drawback.

Our proposed model has many advantages over typical vehicles which is listed above. They use clean source of energy that is readily available in the nature. One of the major advantage of our proposed model is that it can be charged any place where sunlight is available. It has all advantages of an electric vehicle in addition to that it provide a free of cost fueling and zero carbon emission.

5.2 COST ANALYSIS OF PROTOTYPE

Cost analysis of our prototype is given below.

ITEM	COST
Motors and gear box	5000
Drive	3,000
Remote controller	1,300
Battery	5,00
Miscellaneous expenses	6,200
Total	16,000

Table 5.2: Cost analysis of proposed model

CHAPTER 6

CONCLUSION

Energy from renewable sources or resources, which are regenerated naturally, is frequently used to power four crucial areas: electricity production, air and water heating and cooling, transportation, and rural energy services. India's potential for solar energy generation is enormous. The country's physical location is advantageous for producing solar energy. India is a tropical country, and as a result, it receives solar radiation virtually all year long. India therefore has a largescale strategy for solar energy generation that may not only fill the gap in electricity generation but also play a significant role in the creation of green energy. The nation enjoys 300 sunny days on average each year, which makes it the perfect place to produce solar energy. India has the capacity to produce up to 750 GW of solar energy, which is more than adequate to cover the nation's energy.

Solar cells, also known as photovoltaic cells, which are solid state devices that can directly convert solar energy into electrical energy through quantum mechanical transitions, are packaged and connected to form solar panels. They produce no noise or pollution, have no revolving parts, and require less maintenance. Solar-powered automobiles have gained popularity as a result of the growing interest in sustainable and renewable energy sources. A lot of automakers are attempting to produce solar powered vehicles. The battery that powers the car's motors would then be fueled by the electricity thus produced. Obtaining an electrically powered car that runs on sustainable energy, emits no harmful gases and requires very little maintenance. Using solar energy for cars will be a huge benefit for everyone because it saves money to run the car. They have wide verities of applications like they can be used as commercial four-wheeled drives and can be used in areas where fuel-based vehicles are not permitted. Electric vehicles with solar panels integrated become self-sufficient and environmentally benign. The electrical energy they create can offset their initial cost. The efficiency of solar panel is around 20% and also it is unavailable at night time so we need a big battery bank. By addressing its existing constraint through research, we can make it lighter, more efficient, and more cost effective.

In this project, we are developing a prototype electric vehicle operating on solar energy using a 17V solar panel. Output of solar panel is stabilized using PSW of 12V and the output is fed into battery of 12V. Also there is a charging port which can be used to charge the battery using AC power. Major portion of work is done by the front wheel and back wheel just follows the front wheel. Our prototype is completely remote controlled. Speed of our system is 7km/h and it can withstand up to 25kg. Our proposed model has some limitations such as small speed range and simultaneous charging and discharging is not possible. Future researches can make it more efficient by fixing solar panels in their doors and also rectifies the above mentioned drawbacks.

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