

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that the number of B.T Electronics and Communication Engineering students undertaking project work / Internship / field project for the Academic year 2022 - 2023 is 227 and the list of students and details are as follows:

S.No.	Register Number	Name	Year	Project	Internship	Field Project	Title of the project	Internship (Organization)	Field Project (Organization)
1	410719106034	HARI SAILESH P	IV	√			Design and Development of Hybrid Electric Vehicle With IoT		BSNL
2	410719106057	LOGESHWARAN P	IV	√	√				
3	410719106083	SABESH RATHINAM P	IV	√					
4	410719106020	CHARAN K	IV	√			Under water communication using wireless sensor networks		BSNL
5	410719106023	DEVARAPU SANTHOSH	IV	√	√				
6	410719106104	PARVATHALA SUNEEL KUMAR	IV	√					
7	410719106052	KOTURU SRI HARI SAI	IV	√			Under Ground cable fault monitoring system		
8	410719106095	SINGIRI CHANUKYA	IV	√					
9	410719106050	KOMMI SAI VENKATA PAVAN KUMAR	IV	√					
10	410719106043	AVULA JYOTHI CHARAN	IV	√			Recognition of spurious profile		
11	410719106070	NAGETI MUNI RAJA	IV	√					
12	410719106058	LOKESH S	IV	√					
13	410719106040	JEYAGANESH S	IV	√			Driver Drowsiness detection using Brain Interface		
14	410719106103	SUDHARSAN V K	IV	√					
15	410719106110	AYAZPUR UDAY KIRAN	IV	√					
16	410719106061	SURIBOYINA MANOJ	IV	√			Rice Grain Quality Analysis Using Deep Learning		
17	410719106009	SRIHARIKOTA ARUN KUMAR	IV	√					
18	410719106119	YEGNAM PENCHALA LOKESH	IV	√					
19	410719106004	ADURU VENKAT DINESH	IV	√			Robot control using accelerometer and obstacle Detection		
20	410719106012	BANDILI SUMANTH	IV	√					
21	410719106113	VEMPALLI KAMESWAR REDDY	IV	√					
22	410719106010	AVULA SHEK AKRAM BASHA	IV	√			IoT Based safety surveillance system for children		
23	410719106016	BUDILI GANESH KUMAR	IV	√					
24	410719106069	NAGAPPAGARI DEVASANKAR SAI	IV	√					
25	410719106073	BOJJA NAVEEN KUMAR	IV	√					
26	410719106099	CHAKALI SIVA KUMAR	IV	√					



  
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S.No.	Register Number	Name	Year	Project	Internship	Field Project	Title of the project	Internship (Organization)	Field Project (Organization)
27	410719106013	BANKA ANANTHA KUMAR	IV	√			Virtual trail room for online shopping		
28	410719106021	CHELIKICHARLA GIREESH BABU	IV	√					
29	410719106035	ADIMULAM HEMANTH KUMAR VYAS	IV	√					
30	410719106115	KADURU VINAY	IV	√					
31	410719106049	MOPURI KISHORE KUMAR REDDY	IV	√			Reliable attendance Monitoring system		
32	410719106041	JOLLU ASHOK KUMAR YADAV	IV	√					
33	410719106066	CHAKKA VENKATA NAGABABU	IV	√					
34	410719106007	ALGOTWAR GANGAPRASAD	IV	√					
35	410719106003	YANAMALA ADARSH	IV	√			Deep Learning Based forest fire Response System		
36	410719106027	DUDI JAGADEESH	IV	√					
37	410719106071	NARAPAREDDY AMARNATHA REDDY	IV	√					
38	410719106118	YARAVA SREENIVASULA REDDY	IV	√			Prediction of used cars prices using Machine Learning		
39	410719106108	THANNERU YASWANTH	IV	√					
40	410719106017	BURRI CHITHRA	IV	√			Human Mortality Prediction using CAT Boosting Algorithm		
41	410719106029	GARIKA YAMINI PRIYANKA	IV	√					
42	410719106090	SHAIK PARVEEN	IV	√					
43	410719106022	DASARI CHETHANA	IV	√			Automated Identification of Vehicle Using Deep Learning Neural Network		
44	410719106105	SWARNA RAJINI	IV	√					
45	410719106063	MURAM REDDY MONIKA	IV	√					
46	410719106068	NAGAM PRAGATHI	IV	√			IoT Based Paralysis Patient Health Monitoring System		
47	410719106107	TAVVA SUJINI	IV	√					
48	410719106096	NEELAM SIREESHA	IV	√					
49	410719106122	YUVASHREE M	IV	√					
50	410719106077	PAVITHRA K	IV	√			Crop recommendation using machine learning algorithms		
51	410719106067	NAGALAKUNTA PRAVALLIKA	IV	√					
52	410719106037	KAMASANI JANANI	IV	√					
53	410719106101	MULLAMURI SOWJANYA M	IV	√					



  
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S.No.	Register Number	Name	Year	Project	Internship	Field Project	Title of the project	Internship (Organization)	Field Project (Organization)
54	410719106091	SHAIK SHEHANAZ	IV	√					
55	410719106046	KAVIYA R	IV	√			Offensive language identification using Machine Learning		
56	410719106044	KALAIVANI V	IV	√					
57	410719106098	SIVA BHARATHI S	IV	√					
58	410719106120	YUHASRI M	IV	√			Real-Time Hand Gesture Recognition and Interpretation using Machine Learning		
59	410719106076	NIVEDHA E	IV	√					
60	410719106116	VISHNUPRIYA I	IV	√					
61	410719106059	JENNA JODLY S	IV	√			Human stress predictions using supervised ML techniques in AI		
62	410719106112	VEDHAVALLI D	IV	√					
63	410719106048	KEERTHANA E	IV	√					
64	410719106047	KAVIYA S V	IV	√					
65	410719106100	SNEHA T	IV	√			IoT enabled under ground drainage monitoring system in sewage networks		
66	410719106062	MARGREAT R	IV	√					
67	410719106056	INDHUJA B	IV	√					
68	410719106095	SHARMILA J	IV	√			Credit Card Fraud Detection using Deep Neural network algorithms		
69	410719106025	DHASARATHI G	IV	√					
70	410719106006	AJKALA ISWARYA	IV	√					
71	410719106028	EPURU SATHVIKA	IV	√			Instantaneous object detection using Deep Learning		
72	410719106051	KOTAPATI BHAVAGNA	IV	√					
73	410719106097	SIRIPIREDDY BHUMIKA	IV	√					
74	410719106085	SANJAY V S	IV	√			Smart helmet for cellphone accident avoidance frequency based vehicle controlling approach on IoT		
75	410719106033	GURU AKASH L	IV	√					
76	410719106087	SATHISH S B	IV	√					
77	410719106078	POLISETTY CHINMAY	IV	√					
78	410719106019	CHANDRU M	IV	√			Sea-way border alert system based on ML & RSSI		
79	410719106072	NARENDRAPRASATH V	IV	√					
80	410719106018	CHAMULURU RAJ KUMAR REDDY	IV	√					
81	410719106059	PESALA MADHUSUDHAN REDDY	IV	√			Early detection of Pancreatic Tumor using Deep learning techniques		
82	410719106005	AKASH KUMAR C	IV	√					
83	410719106111	VANTARI UDAY KIRAN	IV	√					



  
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S.No.	Register Number	Name	Year	Project	Internship	Field Project	Title of the project	Internship (Organization)	Field Project (Organization)
84	410719106056	LINGAMDINNE SAMBA SIVA REDDY	IV	√			Smart plant monitoring system using IoT		
85	410719106002	PINDI ABINAY KUMAR	IV	√					
86	410719106094	RAYROTH SHASHANK	IV	√					
87	410719106008	ANGILIKAM AVINASH	IV	√			Smart mobile system for pregnancy care using body sensors		
88	410719106032	GUDURU BASHA	IV	√					
89	410719106045	BOREDDY KALYAN REDDY	IV	√					
90	410719106075	NITHISH V	IV	√			IoT based vehicle tracking and monitoring system		
91	410719106055	LAL RICHARD E S	IV	√					
92	410719106064	MOULI M	IV	√					
93	410719106082	CHINTHAM RUTHESH PREMKANTH	IV	√			Rainfall forecasting and density estimation using Machine Learning		
94	410719106092	SHAIK SOHAIL	IV	√					
95	410719106061	SYED MASTAN SHAFIR	IV	√					
96	410719106015	BOYELLA SUMANTH	IV	√			Suspicious object detection using Machine Learning		
97	410719106065	MUNNAM PRASANNA KUMAR	IV	√					
98	410719106001	SHAIK ABDUL REHMAN	IV	√					
99	410719106038	DASARI JAYANTH	IV	√			Smart Detection Robot using IoT		
100	410719106014	PUTTU BHARATH KUMAR	IV	√					
101	410719106042	JOTHI PRIYA V	IV	√					
102	410719106053	KRATHIKSHA E	IV	√			Driver's fatigue detection using HOG features from facial images		
103	410719106086	SARITHA A B	IV	√					
104	410719106031	GLORY K	IV	√					
105	410719106084	SAMRITHIKAA P	IV	√			A Zigbee IoT-Enabled trash bin level monitoring system		
106	410719106102	SRIDEVI S S	IV	√					
107	410719106024	DHANUSH D	IV	√					
108	410719106079	PRAVEEN KUMAR E	IV	√					
109	410719106080	PRAVEENKUMAR P	IV	√					
110	410719106081	RAVIKUMAR P	IV	√					



  
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111	410719106054	LAKSHMI K.ANTHAN V	IV	√			Smart Restaurant based menu ordering system multi view visualisation of VR		
112	410719106060	MALLU CHANDRA SEKHAR	IV	√					
113	410719106088	SEDHURAM S	IV	√					
114	410720106003	JASHWANTH P L	III			√		BSNL	
115	410720106004	JAYASURYA R	III			√		BSNL	
116	410720106005	MAHALAKSHMI G	III			√		BSNL	
117	410720106006	MOHAMMED SAMEER A	III			√		BSNL	
118	410720106007	MOHARIDHA K	III			√		BSNL	
119	410720106008	AVULA NARASIMHANAIDU	III			√		BSNL	
120	410720106009	PENUDHOTA VEERA BRAHMAM	III			√		BSNL	
121	410720106010	POTLA ACHYUTH KUMAR	III			√		BSNL	
122	410720106011	POTTURU VENKATESH	III			√		BSNL	
123	410720106014	SARAVANAN V	III			√		BSNL	
124	410720106015	SATHISH A	III			√		BSNL	
125	410720106016	SOORAJ M	III			√		BSNL	
126	410720106018	SYEDA RUHANAA NARGIS R	III			√		BSNL	
127	410720106019	YOGESHWARI T K	III			√		BSNL	
128	410720106301	DUVVURU PAVANI	III			√		BSNL	
129	410720106303	RAJA RAMANATHAN K	III			√		BSNL	
130	410721106001	AAKASH R	II			√		BSNL	
131	410721106005	ADI ABIKRISHNA	II			√		BSNL	
132	410721106004	AKASH M	II			√		BSNL	
133	410721106005	AKKULA SRI THARUN	II			√		BSNL	
134	410721106006	ASHOK KUMARAN N R	II			√		BSNL	
135	410721106007	AYISHA S	II			√		BSNL	



  
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S.No.	Register Number	Name	Year	Project	Internship	Field Project	Title of the project	Internship (Organization)	Field Project (Organization)
136	410721106008	BAIRABATHINA MUNISUDHAKAR	II			√			BSNL
137	410721106009	BHARATH J	II			√			BSNL
138	410721106010	BHUVANESHWARI R	II			√			BSNL
139	410721106011	BHUVANESHWARI S	II			√			BSNL
140	410721106012	BODDU NAGESWARI	II			√			BSNL
141	410721106013	CHANDRASEKHAR M	II			√			BSNL
142	410721106014	CHEBROLU SUBHASH	II			√			BSNL
143	410721106015	DAYYALA CHITRA	II			√			BSNL
144	410721106016	DEEPAK V	II			√			BSNL
145	410721106017	DHANUSH KUMAR V	II			√			BSNL
146	410721106019	DIVYA DARSHINI T	II			√			BSNL
147	410721106020	GADI HARIPRIYA	II			√			BSNL
148	410721106021	GALAM RAMBABU	II			√			BSNL
149	410721106022	GALI VASU	II			√			BSNL
150	410721106023	GOKUL S	II			√			BSNL
151	410721106024	HARIHARAN E	II			√			BSNL
152	410721106025	HARI RAM BHASKAR	II			√			BSNL
153	410721106026	HEMATH KUMAR NIDHI R	II			√			BSNL
154	410721106027	JADAPALLI SAI KIRAN	II			√			BSNL
155	410721106028	JANA PRADAP S	II			√			BSNL
156	410721106029	KARTHIKEYAN S	II			√			BSNL
157	410721106030	KARTHIP J	II			√			BSNL
158	410721106031	KAVYA V	II			√			BSNL
159	410721106032	KOMMI MANOGNA NAIDU	II			√			BSNL
160	410721106033	KONDURU MAHITHA	II			√			BSNL
161	410721106034	LAKKALAPUDI BHANU PRASAD	II			√			BSNL
162	410721106035	LOKESH G	II			√			BSNL
163	410721106036	LOKESH R	II			√			BSNL
164	410721106037	MADHESHWARAN A K	II			√			BSNL
165	410721106039	MANDATI GURUPRASAD	II			√			BSNL



  
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S.No.	Register Number	Name	Year	Project	Internship	Field Project	Title of the project	Internship (Organization)	Field Project (Organization)
166	410721106040	MOHAMMED SHO'AIB KHAN I	II			√			BSNL
167	410721106043	PALURU VISHNU VARDHAN	II			√			BSNL
168	410721106044	PRAABHASS V D	II			√			BSNL
169	410721106045	PRAVEEN KUMAR M	II			√			BSNL
170	410721106046	PRIYADHARSHINI P	II			√			BSNL
171	410721106047	PUGAZHENTHI R	II			√			BSNL
172	410721106048	PUVIYARASU G S	II			√			BSNL
173	410721106049	R HARINI	II			√			BSNL
174	410721106050	RISHI KUMAR T S L	II			√			BSNL
175	410721106051	SANDHIYA P M	II			√			BSNL
176	410721106052	SANJAY T	II			√			BSNL
177	410721106053	SANTHOSHKUMAR S	II			√			BSNL
178	410721106054	SARU DHARSHINI R	II			√			BSNL
179	410721106055	SHAIK SHAHUL BAJID	II			√			BSNL
180	410721106056	S SIREESHA REDDY	II			√			BSNL
181	410721106057	SUNITH KUMAR L	II			√			BSNL
182	410721106058	SURYA K	II			√			BSNL
183	410721106059	SUSMITHA V	II			√			BSNL
184	410721106061	THAMBI KIRANKUMAR	II			√			BSNL
185	410721106062	THARUN KUMARAN M	II			√			BSNL
186	410721106063	THIRUGABATHINI AKHIL	II			√			BSNL
187	410721106064	T MONICA DHARSHINI	II			√			BSNL
188	410721106065	TURAKA SIREESHA	II			√			BSNL
189	410721106066	VAISHNAVI C	II			√			BSNL
190	410721106067	VARANASI SWETHA	II			√			BSNL
191	410721106068	VIGNESHWARAN D	II			√			BSNL
192	410721106069	YASWANTH A	II			√			BSNL
193	410721106070	YATTAPU MADHUSUDHAN	II			√			BSNL
194	410721106303	PRAATHIK M	II			√			BSNL
195	410721106305	YUVARAJ E	II			√			BSNL



  
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196	410722106001	AAKASH M	1			√			BSNL
197	410722106002	ABDUR RAHMAN S	1			√			BSNL
198	410722106003	ANITHA A	1			√			BSNL
199	410722106004	BALAKUMARAN G	1			√			BSNL
200	410722106005	DEVIPRIYA N B	1			√			BSNL
201	410722106006	GIRIRAJAN D	1			√			BSNL
202	410722106007	GURU PRASATH A R	1			√			BSNL
203	410722106008	HARIBABU N	1			√			BSNL
204	410722106009	I VENKAT BABU	1			√			BSNL
205	410722106010	JAYA PRAKASH S	1			√			BSNL
206	410722106011	JESWIN PAUL WILSON E	1			√			BSNL
207	410722106012	KISHORE KUMAR S	1			√			BSNL
208	410722106013	MAHASRI M	1			√			BSNL
209	410722106014	MANIKANDAN P	1			√			BSNL
210	410722106015	MANI SANKAR N	1			√			BSNL
211	410722106017	PRAKASH N	1			√			BSNL
212	410722106018	PRAVEEN R	1			√			BSNL
213	410722106019	PRIYADHARSHINI B M	1			√			BSNL
214	410722106020	RAMYA M	1			√			BSNL
215	410722106021	SABARINATHAN K	1			√			BSNL
216	410722106022	SABARI NATHAN P B	1			√			BSNL
217	410722106023	SAJEET P	1			√			BSNL
218	410722106024	SANTHOSH KUMAR D	1			√			BSNL
219	410722106025	SHARMILA K	1			√			BSNL
220	410722106026	SHIYAMALAN S	1			√			BSNL
221	410722106027	SHUBHAM KUMAR	1			√			BSNL
222	410722106028	SURJITH D	1			√			BSNL
223	410722106029	SURYA R	1			√			BSNL
224	410722106030	THAMILSELVAN R	1			√			BSNL
225	410722106031	THARANI M	1			√			BSNL
226	410722106032	VIGNESH M	1			√			BSNL
227	410722106033	VIJAYARAJ U	1			√			BSNL

Note: Students undertaking more than one activity is considered as ONE



*Signature*

CHIEF ENGINEER  
ANNA UNIVERSITY  
CHENNAI



# **DHANALAKSHMI COLLEGE OF ENGINEERING**

(Approved by AICTE and Affiliated to Anna University)

*NBA Accredited Courses : NAAC Accredited Institution*

Tambaram, Chennai 601 301

# **PROJECT**

# SMART MOBILE SYSTEM FOR PREGNANCY CARE USING BODY SENSORS

A PROJECT REPORT

*Submitted by*

ANGILIKAM AVINASH	410719106008
GUDURU BASHA	410719106032
BOREDDY KALYAN REDDY	410719106045

*in partial fulfillment for the award of the degree*

*of*

**BACHELOR OF ENGINEERING**

**IN**

**ELECTRONICS AND COMMUNICATION ENGINEERING**

**DHANALAKSHMI COLLEGE OF ENGINEERING**





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CHENNAI - 601 301



**ANNA UNIVERSITY: CHENNAI 600 025**

**MAY 2023**

ANNA UNIVERSITY: CHENNAI 600 025

**BONAFIDE CERTIFICATE**

Certified that this project report "SMART MOBILE SYSTEM FOR PREGNANCY CARE USING BODY SENSORS" is the bonafide work of ANGILIKAM AVINASH, GUDURU BASHA, and BOREDDY KALYAN REDDY who carried out the project under my supervision.

  
SIGNATURE 23/5/2023

Dr.A.DEVASENA,M.E.,Ph.D.

**HEAD OF THE DEPARTMENT**

Professor and head,  
Department of ECE,  
Dhanalakshmi College of  
Engineering,  
Chennai-601 301.



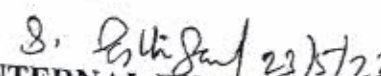
SIGNATURE

Ms.RAMYA.V ME.,(Ph.D)


**SUPERVISOR**


Assistant Professor,  
Department of ECE,  
Dhanalakshmi College of  
Engineering,  
Chennai-601 301.

Submitted for the project Viva-Voce examination held at Dhanalakshmi CollegeOf Engineering, Chennai on ...23-05-2023.....

  
INTERNAL EXAMINER



  
EXTERNAL EXAMINER

  
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CHENNAI - 601 301



## ABSTRACT

Hypertensive disorders are the most common problems during pregnancy. They cause about 10% of maternal deaths. The world mortality rate has decreased but many women are still dying every day from pregnancy complications. Various technic resources are being used in an integrated manner in order to minimize even more the death of both mothers and babies. Mobile devices with Internet access have a great potential to expand actions of health professionals. These devices facilitate care with people that are living in remote areas, assisting in patient monitoring. Information exchange anywhere and anytime between experts and patients could be an important way to improve the pregnancy monitoring. This paper presents a mobile monitoring solution using body sensors to identify worsens in the health status of pregnant women suffering hypertensive disorders. This mobile application uses Naïve Bayes classifier to better identify hypertension severity helping experts in decision making process. Results show that the proposed mobile system is promising for monitoring blood pressure disorders in pregnancy.

**IoT BASED VEHICLE TRACKING AND  
MONITORING SYSTEM  
A PROJECT REPORT**

*Submitted by*

<b>LAL RICHARD E S</b>	<b>410719106055</b>
<b>MOULI M</b>	<b>410719106064</b>
<b>NITHISH V</b>	<b>410719106075</b>

**in partial fulfillment for the award of the degree of  
BACHELOR OF ENGINEERING**

**in**

**ELECTRONICS AND COMMUNICATION ENGINEERING**

**DHANALAKSHMI COLLEGE OF ENGINEERING**



**ANNA UNIVERSITY: CHENNAI 600 025**

**MAY 2023**

**PRINCIPAL  
DHANALAKSHMI COLLEGE OF ENGINEERING  
CHENNAI - 601 301**



BONAFIDE CERTIFICATE

Certified that this project report "IoT BASED VEHICLE TRACKING AND MONITORING SYSTEM" is the bonafide work of LAL RICHARD E S, MOULI M, NITHISH V who carried out the project under my supervision.

*[Signature]*  
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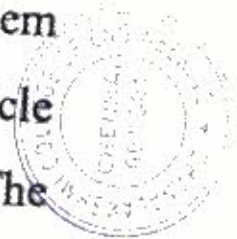


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## ABSTRACT

On reviewing the past work of college vehicle tracking, monitoring and alerting system, there is a possibility to categorize various methodologies and identify new trends. One among them is a challenge for vehicle tracking, monitoring and alerting system. Now- a-days with the increase in the crime rate and accidents, parents worry about their wards when they are going to colleges. And many Students find themselves locked in a college vehicle in the vehicle parking lot after falling asleep on their way to college, miss the vehicle, or leave at the wrong station. This project makes use of the applicability of IOT technology for tracking and monitoring Student during their trip to and from college, on college vehicles. And it has the advantage of efficient tracking capabilities, low cost and easy maintenance. Location of the vehicle also can be calculated and send a message to the students through GSM. The system consists of three main units, vehicle unit, student unit and college unit. The vehicle unit is used to detect when a student enters/exits from the vehicle using IOT. The system tracks the college vehicle by the IOT.



**SEA-WAY BORDER ALERT SYSTEM BASED ON  
MACHINE LEARNING AND RSSI**

**A PROJECT REPORT**

*submitted by*

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## ABSTRACT

The technology proliferation of Received Signal Strength Indication (RSSI) is used to provide Location based positioning and time details in all climatic conditions and even anywhere any time. This method focuses on implementing border identification system for all boats. However, the existing system is not powerful enough to prevent the crime against fishermen. As it gives only the information about the border identification but not about the exact distance that the boat has travelled from the border the proposed system's transmitter section includes microcontroller RSSI module, voice playback circuit and DC motor and the receiver section includes RSSI. The machine learning algorithm is used to predict the future rain fall for assistive system for fishermen.



  
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# RAINFALL FORECASTING AND DENSITY ESTIMATION USING MACHINE LEARNING

A PROJECT REPORT

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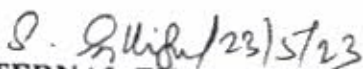
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## ABSTRACT

India is agrarian and its economy is primarily based on crop productivity and rainfall. Rainfall forecasting is very important for all farmers to analyse crop productivity. Precipitation forecasting is the application of science and technology to predict atmospheric conditions. Accurate rainfall estimation is important for efficient use of water resources, crop productivity and advance planning of water resources. It can predict rainfall using various machine learning techniques. Machine learning techniques are used to calculate rainfall. This article focuses on some popular machine learning algorithms for rain forecasting. Simple linear regression, polynomial regression and random forest algorithm are some of the algorithms compared in this article. From this comparison, we can analyse which method gives more accuracy for rainfall forecast.

# INSTANTANEOUS OBJECT DETECTION

## USING DEEP LEARNING

A PROJECT REPORT

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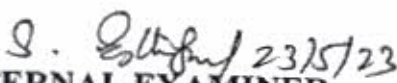
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## ABSTRACT

Deep learning has had a significant impact on how the world is adjusting to Artificial Intelligence (AI). Object recognition is part of the calculation of area Based Convolutional Brain Organization (RCNN), Faster RCNN, Single Shot Identifier (SSD) and You Only Look Once (YOLO). Of these, SSD and Faster-RCNN are more accurate, while Yolo performs better when speed is prioritized over accuracy. Mobile nets and SSDs are combined with deep learning for effective detection and tracking. This algorithm detects objects efficiently, without sacrificing performance. Yolo algorithm looks the image completely by predicting the bounding boxes using convolutional network and the class probabilities for these boxes and detects the image faster as compared to other algorithms.



  
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**SUSPICIOUS OBJECT DETECTION USING  
MACHINE LEARNING**

**A PROJECT REPORT**

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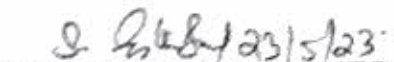
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## ABSTRACT

The detection of suspicious objects in real-time scenarios has become an important aspect of security systems. CCTV and other traditional surveillance systems are still limited to just seeing and recording. This limitation causes its function to only be passive monitoring and unable to provide real-time early warning systems in an effort to anticipate security threats or violations of regulations. A system that can identify suspicious objects using video surveillance systems is needed to address the growing requirement for security, particularly in public areas. The integration of artificial intelligence, machine learning, image processing and computer vision because of the latest study in surveillance system development innovation. Overall, this system is an effective solution for real-time suspicious object detection using a web camera and machine learning algorithms, which can significantly improve security systems' accuracy and efficiency, thereby enhancing public safety. The use of machine learning algorithms can enhance the surveillance system's ability to detect suspicious objects, providing an efficient way to anticipate security threats or violations of regulations in real time. The proposed system's deployment can be used in various security applications, such as airports, public places, and government buildings, where real-time detection of suspicious objects is of utmost importance. The system's application can also be extended to other fields, such as healthcare and manufacturing, where real-time detection of abnormal or suspicious objects can improve quality control and ensure safety.



  
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**CREDIT CARD FRAUD DETECTION USING DEEP NEURAL  
NETWORK ALGORITHMS**

**A PROJECT REPORT**

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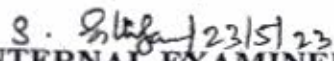
  
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## ABSTRACT

In our project, we focused primarily on real-world credit card fraud detection. First, I collect credit card datasets for the trained dataset. It then provides the user with credit card inquiries to test the data set. Due to the rise and rapid growth of e-commerce, the use of credit cards for online purchases has increased dramatically and caused an explosion of credit card fraud. After classifying the random forest algorithm using the already analysed data set and the user provides the current data set. Finally, optimization. As the credit card becomes the most popular payment method for both online and physical purchases, the number of fraud cases associated with it is also increasing.



  
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**SMART PLANT MONITORING SYSTEM USING IOT**  
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## ABSTRACT

Agriculture plays a vital role in developing countries. In India, most of the population is dependent on agricultural agriculture. Many problems hinder the development of agriculture in developing countries. The project therefore aims to make agriculture smart through automation and IOT technology. Currently, water scarcity is a major problem for agriculture. This project helps farmers to irrigate their farmland efficiently using an automatic irrigation system based on soil moisture. Automation of agricultural activities can change the agricultural domain from manual and static to intelligent and dynamic leading to higher production with less human supervision.

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# DESIGN AND DEVELOPMENT OF HYBRID ELECTRIC VEHICLE WITH IOT

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## ABSTRACT

The project involves creating a hybrid vehicle by integrating electric and conventional powertrains. It aims to design and build a prototype that is efficient and sustainable. The stages include detailed design, component fabrication, and testing. The design incorporates electric motors, an internal combustion engine, and considers size, weight, cooling, and electrical systems. Safety and reliability are priorities. Fabrication involves assembling components like the engine, electric motor, battery, and control system with precision. Testing covers safety and performance under various conditions, using lab and real-world scenarios. The hybrid vehicle is expected to surpass traditional motorcycles in efficiency, emissions reduction, and fuel economy. Electric motors provide low-speed torque and regenerative braking, conserving energy and reducing emissions. The internal combustion engine offers higher-speed power and range for longer travel distances. The main challenges include developing a control system that manages power flow between the electric motors and engine, monitoring speed, acceleration, and braking, while ensuring safe and reliable operation. Seamless integration of electric and gasoline power without compromising performance or safety is also a challenge. Despite these challenges, the Design and Development of Hybrid Vehicle with IoT project is crucial for sustainable transportation. It has the potential to reduce emissions, improve fuel economy, and offer a cost-effective transportation option.

In summary, the Design and Development of Hybrid Vehicle with IoT project aims to create a sustainable and efficient transportation solution. It involves designing and fabricating a prototype vehicle with integrated electric and internal combustion powertrains. A control system manages power flow between these components. Success in this project could contribute to sustainable transportation technologies and a greener future.



# OFFENSIVE LANGUAGE IDENTIFICATION USING MACHINE LEARNING

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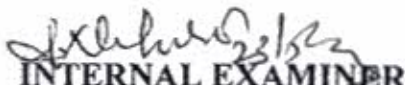
  
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## ABSTRACT

Social media analysis is the process of extracting information from text. Text analytics can be used for any type of information, including social media. Cursing is a big problem that affects people today, even if we see it on social media. Serious crime affects quality of life and economic growth. By researching and analyzing historical data, we can identify attack patterns and predict attacks. We can use social media to investigate crime. Because social media users sometimes share information about their environment through social media. Social media posts with negative and negative content are collected and then we train the machine first using NLP, then by applying the support vector machine algorithm. The model is designed to use the SVM algorithm to classify abnormal and normal messages. After classification, words were further divided into drug-related or crime-related topics by keyword research. Finally, the system can be sent to various social media sites to identify and analyze suspicious content and take necessary action to control the behavior of these sites and the community.



  
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# DEEP LEARNING BASED FOREST FIRE RESPONSE SYSTEM

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## ABSTRACT

The goal of the project is to use image processing technology to detect fires and notify people. Numerous automatic fire alarm systems already exist, such as the sensor method, which has limitations. The project is put into action by connecting the webcam as hardware and using the PyCharm IDE. Using the open CV library for image processing, the entire code is written in Python. The webcam is used as an input source, capturing the surrounding video and feeding it into the system for analysis. The project mainly emphasis on computer vision, machine learning, image processing, the color model, and the project's working fire detection algorithm. We plan to overcome the shortcomings of the present systems and provide an accurate and precise system to detect fires as early as possible and capable of working in various environments thereby saving innumerable lives and resources.



  
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# DRIVER DROWSINESS DETECTION USING BRAIN INTERFACE

## A PROJECT REPORT

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**IN**

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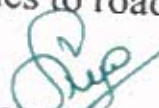
  
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## ABSTRACT

In the event of a road collision, drowsiness is becoming a serious problem. Typically, eyeblink rate, yawning, grip force on the wheel, and other characteristics can be used to determine whether someone is sleeping. However, all of these measurement approaches will only examine a person's physical activities. Sometimes folks will mentally nod off for a short while while keeping their eyes open. Driving accidents will become quite severe as a result. Therefore, in our suggested project effort, we are using EEG signals based on Brain-Computer Interface (BCI) technology to analyse the mental activities of the brain. Analysing the brain signals is the project's main task. Numerous millions of linked neurons make up the human brain. The human mind will cause this neuron pattern to shift. Each time a pattern forms, a distinct electric brain signal will emerge. The brain signal for attention will shift from the typical state if a person is mentally asleep while keeping their eyes open. In order to assess the amount of attention, this research uses a brain wave sensor that can gather EEG-based brain signals of various frequencies and amplitudes, transform those signals into packets, and communicate those packets through Bluetooth. The Level Splitter Section (LSS) analyses the level, warns against drowsy driving, and retains the car under self-control until the driver is awake. When it comes to road transit, this can save many lives.



  
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# CROP RECOMMENDATION USING MACHINE LEARNING ALGORITHMS

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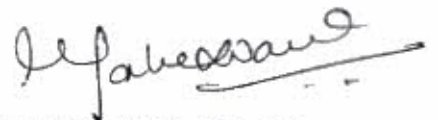
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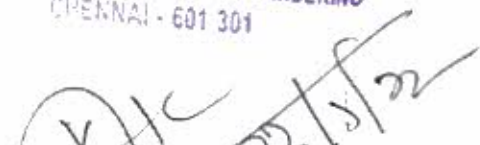
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## ABSTRACT

In terms of employment and the Indian economy, agriculture is the most significant. Indian farmer's most frequent problem is that they do not select crops based on the needs of the land, which causes huge output losses. This issue can be resolved using precision agriculture. The farmers are advised which crop to plant using this strategy, which takes into account three factors: soil types, soil features, and crop recommendations. In addition to the advantages of efficiency in both input and output and improved farming decision-making, precision agriculture helps in the elimination of unsuitable crops, which increases productivity. In order to identify the best crop based on soil variables with high specific accuracy and efficiency, this method offers recommendations using an ensemble model with majority voting procedures and a random tree as a learner.

Keywords: Crop Recommendation, Machine Learning, Precision Agriculture, Random Forest.



  
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# IoT BASED WASTE MANAGEMENT IN SMART CITY

A PROJECT REPORT

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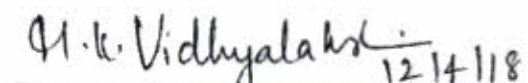
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## ABSTRACT

The Internet of Things (IoT), as expected infrastructure for envisioned concept of Smart City, brings new possibilities for the city management. IoT vision introduces promising and economical solutions for massive data collection and its analysis which can be applied in many domains and so make them operating more efficiently. In this paper, we are discussing one of the most challenging issues - municipal waste collection within the Smart City. IP Webcam is also fixed in each garbage unit and the captured image is send to the municipal office to monitor and maintain a clean environment smart city.If the dustbin gets filled we send the SMS to authorized person in a particular time they didn't response we will intimate to the higher authorized persons.



  
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# RICE GRAIN QUALITY ANALYSIS USING DEEP LEARNING

A PROJECT REPORT

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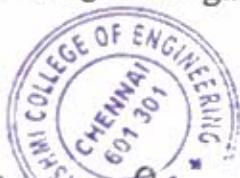
  
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## ABSTRACT

Rice is the most favorable and most consuming food for all the human being in all over the world. Market for rice depends on the quality of it. Currently the type and quality of rice are assessed by visual inspection method through naked eye. This process is however tedious, time consuming, needs human expertise and depends on physical fitness of the inspector. To overcome these drawbacks, in this paper, an automated system is introduced which identifies and classifies the rice grains based on digital image processing techniques.

Image processing method is most suitable as it is a non-contact technique, where in the image of the rice grains are captured. The captured images are pre- processed, segmented and features are extracted through MATLAB. From the extracted features the quality of rice is assessed based on Neural Networks (NN) and Support Vector Machine (SVM) classifier algorithms. A comparative study is made between these two methods and the results infer that SVM based classification outskirts its counterpart.



  
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# VIRTUAL TRAIL ROOM ONLINE SHOPPING

## A PROJECT REPORT

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## ABSTRACT

It usually takes a lot of time to try things on in the store. However, in situations such as online shopping, it may not even be possible to try on the clothes. The popularity of online shopping has increased significantly these days, especially after the Covid lockdown and pandemic disruptions. When buying things like clothes, it is important to understand how the clothes will look on the buyer. This is the main reason for the decline in online clothing sales. Thus, a virtual online shopping trail would be a huge luxury for online retailers to offer users a great deal of choice. This would allow people to see how the clothes fit them individually. It would be a fantastic tool for online shopping merchants to expand their market. By creating a virtual trail environment, we hope to improve the accessibility and time efficiency of trying on clothes. In this project, we provide an open CV based online shopping virtual trail application. Virtual Trail Room is an innovative solution that offers a personalized and immersive shopping experience to online shoppers. With the increasing popularity of e-commerce, customers face the problem of not being able to try on clothes before buying. The Virtual Trail Room solves this problem by allowing customers to virtually try on clothes in a digital environment Overall, the Virtual Trail Room is an innovative solution that bridges the gap between online shopping and traditional in-store shopping. It provides customers with a personalized and engaging shopping experience that can significantly improve the overall customer experience and increase sales for e-commerce businesses.



  
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RELIABLE ATTENDANCE MONITORING SYSTEM

INTERFACE

A PROJECT REPORT

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JOLLU ASHOK KUMAR YADAV [410719106041]

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## ABSTRACT

The proposed research work defined for the acknowledgement on fingerprint and IR sensor-based attendance system for institution faculty, as well as its significance. We mainly emphasize the problem the faculty face due to the lack of any existing system which does not use any alert or notification mechanism like sending an SMS to the faculty's mobile phone to prompt them to mark their attendance. The essential purpose of this system is to create a automated notifications based on the biometric fingerprint authentication for attendance. The system avoids attendance oriented discrepancies and overheads on a central repository



  
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# PREDICTION OF USED CARS PRICES USING MACHINE LEARNING ALGORITHMS

A PROJECT REPORT

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## ABSTRACT

The newly produced cars are unable to reach the customers for various reasons like high prices, less availability, With the extensive growth in usage of cars, financial incapability, and so on. Hence the used car market's escalated across the globe but in India, the used car market is in a very nascent stage and mostly dominated by the unorganized sector. This gives chance for fraud while buying a used car. In this model, A Supervised learning-based Random Forest Machine Learning model are developed which can learn from the car dataset provided to it. User interface has also been developed which acquires input from user's and display price of the car according touse



  
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**UNDERGROUND CABLE FAULT  
MONITORING SYSTEM**

**A PROJECT REPORT**

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## ABSTRACT

In this project we proposed a method to find the faults in the underground cable using microcontroller(esp32). The aim of this project is to determine the exact location of fault with latitude and longitude. When any fault occurs in underground cable the voltage will be fluctuate because current at that point will varies. This project presents the working model of the device that can help humans to find faults in underground cable where human presence is dangerous due to environmental conditions .Hence we can inspect the faults under such circumstances .Though there are several approaches to find faults in underground cable ,this paper is going to find it in a simpler way and more efficiently using voltage sensors.



  
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**RECOGNIZATION OF SPURIOUS PROFILE USING MACHINE  
LEARNING**

**A PROJECT REPORT**

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## ABSTRACT

In the present generation, the social life of everyone has become associated with online social networks. These sites have made a drastic change in the way we pursue our social life. Making friends and keeping in contact with them and their updates has become easier. But with their rapid growth, many problems like fake profiles, online impersonation have also grown. There are no feasible solutions exist to control these problems. In this paper, I came up with a framework with which the automatic identification of fake profiles is possible and is efficient. This framework uses classification techniques like Random Forest Classifier to classify the profiles into fake or genuine classes. As this is an automatic detection method, it can be applied easily by online social networks that have millions of profiles whose profiles cannot be examined manually.

Nowadays, mobile operators in China mainland are facing fierce competition from one to another, and their focus of customer competition has, in general, shifted from public to corporate customers. One big challenge in corporate customer management is how to identify fake corporate members and potential corporate members from corporate customers. In this study, we have proposed an identification method that combines the rule-based and probabilistic methods. Through this method, fake corporate members can be eliminated and external potential members can be mined. The experimental results based on the data obtained from a local mobile operator revealed that the proposed method can effectively and efficiently identify fake and potential corporate members. The proposed method can be used to improve the management of corporate customers. To avoid the spam message, malicious and cyber bullies activities which are mostly done by the fake profile. These activities challenge the privacy policies of the social network communication.



DEPARTMENT OF INFORMATION TECHNOLOGY  
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**UNDERWATER COMMUNICATION USING  
WIRELESS SENSOR NETWORKS  
A PROJECT REPORT**

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## ABSTRACT

Water data communication is a potential technology to realize underwater communication. The experiment of underwater data communication in the laboratory is different with that in the real water environment because the physical scale is limited. Although since recent several decades, artificial scattering agents are used to recreate underwater data communication through water channels under different communication medium conditions, but the similarity between experimental water and natural water is not reliable, such as the similarity in frequency domain characteristics. of data communication through water channel in experimental water is measured and compared. The results show that the type and particle size of the agents will significantly affect its water properties, and the frequency domain component of the water communication signal will be affected by the agent's concentration. By having a separate transmitter and receiver module in the water between the modules we can transmit the sea researcher's biomedical conditions and interactions to the monitoring end available on the ship.



  
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# ROBOT CONTROL USING ACCELEROMETER AND OBSTACLE DETECTION

A PROJECT REPORT

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## ABSTRACT

The value of human life cannot be overstated. Numerous people die in road accidents each year. Over-speeding, a poor traffic system, drinking and driving, rough driving, and other factors can all contribute to an accident. The goal of this paper is to create a model that can be used in cars to find accidents caused by zero visibility in winter fog and warn other drivers to avoid them.

The Internet of Things (IoT) is a new technology that can greatly benefit the intelligent transportation system. The goal of this paper is to create an automated IoT-enabled system that can be used in cars to detect and avoid accidents when there is no visibility in fog. The Ultrasonic sensor will be integrated with the Raspberry Pi and other supporting components (power bank, jumper wires, breadboard, etc.) in order to construct this system.

  
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**AUTOMATED IDENTIFICATION OF VEHICLE  
USING DEEP LEARNING NEURAL NETWORK**

**A PROJECT REPORT**

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## ABSTRACT

This project proves region recognition, hence the difference between tools and the use of Convolutional Neural Network (CNN) for standalone tools. The area must be determined so that vehicles can be driven without colliding with other vehicles. The problem of poor vehicle detection in bad weather and at night has been the focus of previous research. This article presents a method to detect vehicles in night scenes in severe weather conditions (no lighting problems) using the CNN approach. 301 vehicle datasets from python, Intercity Roads and Adverse Driving Scenarios (road) and KITTI Vision were used. While CNN trained using 177 input images during training, it used 124 images during testing. The simulation results show that the detection accuracy is improved in various weather conditions. Identification accuracy is 94.3% in cloudy weather, 80.4% in evening weather, 85.4% and 98.7% mostly in cold weather. As a result, the CNN concept shows good results in recognizing the car in night scenes (without lighting) and in severe weather conditions.



  
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**IoT BASED PARALYSIS PATIENT HEALTH  
MONITORING SYSTEM  
PROJECT REPORT**

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## ABSTRACT

In the medication process, it is a common practice to treat patients with saline solution for dehydration and other health problems to improve the health status of patients. During saline feeding, continuous monitoring by nurses is mandatory when monitoring the saline level. There are many cases where patients are harmed due to the inattention of the staff because their absence does not register the refilling of the saline level in the container. This creates the problem of backflow of blood immediately after the completion of the physiological solution in the container. Therefore, an IoT-based saline level monitoring system was developed to protect the patient from harm. The proposed model contains a sensor that continuously detects drops of physiological solution. Whenever the sensor does not detect drops for a certain interval, it alerts hospital staff with a buzzer, helping to monitor patient safety.



  
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**DRIVER DROWSINESS DETECTION USING BRAIN INTERFACE**  
**A PROJECT REPORT**

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## ABSTRACT

In the event of a road collision, drowsiness is becoming a serious problem. Typically, eyeblink rate, yawning, grip force on the wheel, and other characteristics can be used to determine whether someone is sleeping. However, all of these measurement approaches will only examine a person's physical activities. Sometimes folks will mentally nod off for a short while while keeping their eyes open. Driving accidents will become quite severe as a result. Therefore, in our suggested project effort, we are using EEG signals based on Brain-Computer Interface (BCI) technology to analyse the mental activities of the brain. Analysing the brain signals is the project's main task. Numerous millions of linked neurons make up the human brain. The human mind will cause this neuron pattern to shift. Each time a pattern forms, a distinct electric brain signal will emerge. The brain signal for attention will shift from the typical state if a person is mentally asleep while keeping their eyes open. In order to assess the amount of attention, this research uses a brain wave sensor that can gather EEG-based brain signals of various frequencies and amplitudes, transform those signals into packets, and communicate those packets through Bluetooth. The Level Splitter Section (LSS) analyses the level, warns against drowsy driving, and retains the car under self-control until the driver is awake. When it comes to road transit, this can save many lives.



  
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# HUMAN MORTALITY PREDICTION USING CAT BOOSTING ALGORITHM

A PROJECT REPORT

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## ABSTRACT

In health care, the phrase "mortality" signifies the fatality rate or the entire number of deaths among a certain population within a given time frame. People who have a particular disease, reside in a particular region of the country, or belong to a specific race, age spectrum or cultural group may have their mortality reported. The fatality rate in hospitals is determined by the proportion of sick patients who pass away in the hospital. The hospital fatality rate would logically appear to be a significant indicator of quality since it would be expected to represent the safety, efficiency in critical situations and timeliness of care. The suggested approach entails creating an AI model Using SVM algorithm, KNN algorithm, Ada boost algorithm, and Cat boost algorithm to train model data. The algorithm with highest accuracy which is Cat boost algorithm is deployed in model to improve the prediction whether the person will live or die.



  
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**IoT BASED SAFETY SURVEILLANCE FOR  
CHILDREN**

**A PROJECT REPORT**

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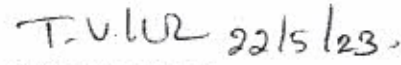
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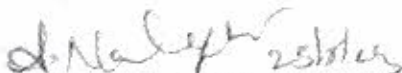
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## ABSTRACT

In real world, the children safety is a huge question mark in everyone's mind. Parents always expect their children should live in a secured place where they can spend their time and mind without any problem. But, typically half of them are facing so many issues. This issue can be monitored by using IoT components and sensors to check in the child environment whether people with unaccepted behavior are moving. If children close with them, then the system has to give an alert message that someone stands with the child. By tracing the locations of the children, the parents can able locate where the problem is and how they can help the child from such issues. The heartbeat and Temperature sensor are recommended along with Pressure sensor to check whether the child in any abnormal conditions. By measuring the different input data and taking appropriate decisions may help the people to save the children.



  
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**SMART RESTAURANT BASED MENU ORDERING  
SYSTEM MULTI VIEW VISUALISATION OF VR  
A PROJECT REPORT**

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## ABSTRACT

This theoretical investigates the idea of brilliant cafés and their capability to change the eating experience. Shrewd eateries use cutting edge innovations like the Web of Things (IoT), man-made brainpower (simulated intelligence), and mechanization to upgrade productivity, further develop consumer loyalty, and advance asset the executives. Key elements incorporate savvy menu frameworks, mechanized requesting and installment processes, customized suggestions, and constant input systems. These elements, fueled by artificial intelligence calculations and information examination, offer consistent and proficient types of assistance for clients. Shrewd cafés additionally offer advantages like customized encounters, diminished holding up times, and further developed maintainability. Challenges like information security and the harmony among innovation and human cooperation are examined, stressing the requirement for additional exploration in this field.



  
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# DRIVER'S FATIGUE DETECTION USING HOG FEATURES FROM FACIAL IMAGES

A PROJECT REPORT

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## ABSTRACT

Drivers should pay complete attention to the road to respond quickly to unexpected situations. Driver fatigue is often the result of many accidents. In this way, it is proposed to create a system that will distinguish and inform the driver's psychophysiological status and to minimize the number of road accidents caused by driver fatigue. However, the development of such devices faced problems with the speed and the inaccuracies in the determination of signs of fatigue in automobile drivers. A vision-based approach to the design of such a fatigue detection system can provide better results by overcoming the inaccuracies. The drowsiness caused to drivers can be identified by measuring the Perclos of the eye in the visual frame. This work details the development of one such system, that detects the Fatigueness of automobile drivers by extracting the HOG features from the facial image frames through an in-cap camera focusing on the face and using the Haar algorithm for decision-making.

**Keywords:** Fatigue detection, Histogram of Oriented Gradients (HOG), In-cap cameras, Video frames.



  
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**EARLY DETECTION OF PANCREATIC TUMOR**  
**A PROJECT REPORT**

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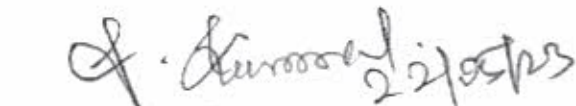
**MAY 2023**

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Certified that this project report "EARLY DETECTION OF PANCREATIC TUMOR" is the Bonafide work of AKASH KUMAR C [410719106005], CHAMULURU RAJ KUMAR REDDY [410719106018], PESALA MADHUSUDHAN REDDY [410719106059], VANTARI UDAY KIRAN [410719106111], who carried out the project under my supervision.

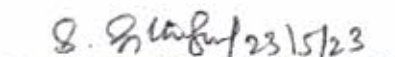
  
SIGNATURE 22/5/2023

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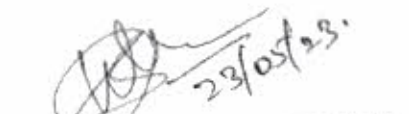
  
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Submitted for the project Viva-Voce examination held at Dhanalakshmi College  
of Engineering, Chennai on .... 23.05.23 .....

  
INTERNAL EXAMINER



  
EXTERNAL EXAMINER

  
DHANALAKSHMI COLLEGE OF ENGINEERING  
CHENNAI - 601 301

## ABSTRACT

Pancreatic Tumor is one of the leading causes of cancer death worldwide. However, pancreatic cancer can be cured if it is detected at an early stage. In this paper, an attempt is made to detect pancreatic tumor from CT images. It uses image processing techniques and a CNN Model Architecture to detect the tumor. After the image pre-processed, CNN Model Architecture is used to detect the tumorous area in the image. It is observed that the training accuracy of detecting tumor is around 98.7%.



  
PRINCIPAL  
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CHENNAI - 601 301

**HUMAN STRESS PREDICTIONS USING SUPERVISED MACHINE  
LEARNING TECHNIQUES IN ARTIFICIAL INTELLIGENCE**

**A PROJECT REPORT**

*Submitted by*

<b>JENNA JODLY S</b>	<b>410719106039</b>
<b>KEERTHANA E</b>	<b>410719106048</b>
<b>VEDHAVALLI D</b>	<b>410719106112</b>
<b>VISHNUPRIYA I</b>	<b>410719106116</b>

*In partial fulfilment for the award of degree*

*of*

**BACHELOR OF ENGINEERING**

*in*

**ELECTRONICS AND COMMUNICATION ENGINEERING**



**DHANALAKSHMI COLLEGE OF ENGINEERING**

**ANNA UNIVERSITY :: CHENNAI 600 025**

**MAY 2023**



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**CHENNAI - 601 301**

ANNA UNIVERSITY: CHENNAI 600 025

**BONAFIDE CERTIFICATE**

Certified that this project report "HUMAN STRESS PREDICTIONS USING SUPERVISED MACHINE LEARNING TECHNIQUES IN ARTIFICIAL INTELLIGENCE" is the bonafide work of JENNA JODLY.S, KEERTHANA.E, VEDHAVALLI.D, VISHNUPRIYA.I, who carried out the project under my supervision.

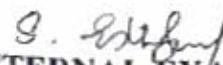
  
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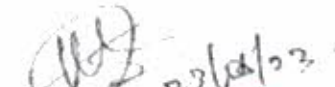
  
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INTERNAL EXAMINER




  
EXTERNAL EXAMINER

  
PRINCIPAL  
DHANALAKSHMI COLLEGE OF ENGINEERING  
CHENNAI - 601 301

## ABSTRACT

Stress plays an important role in influencing a person's decision making, attention, learning and problem solving. Stress research and modelling has been an active area of research in psychology and computer science in recent years. Psychologists measure stress using emotional state, awareness of emotions in the mind. Most of the work on stress classification in humans has been done for-user models that are unavailable to new users. This allows new users to spend more time training the model to predict their emotional state. Serious mental health problems in children require serious treatment and can lead to serious problems if not treated early. Current machine learning techniques are good for analysing medical data and analysing problems. The features were reduced by analysing the features of the entire feature dataset. The accuracy of character selection of various machine learning algorithms is compared.



  
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# REAL-TIME HAND GESTURE RECOGNITION AND INTERPRETATION USING MACHINE LEARNING

A PROJECT REPORT

*Submitted by*

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SIVA BHARATHI. S	[410719106098]
YUHASRI. M	[410719106120]

*in partial fulfillment for the award of the degree*

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**IN**

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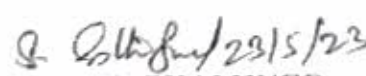
  
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## ABSTRACT

This project aims to automate sign language recognition using key point detection. The project uses various machine learning algorithms such as random forest, support vector machine, and k-nearest neighbor to train the model. The best model is selected based on evaluation metrics such as f1 score, precision, and recall. Media Pipe is used for hand tracking and key point detection. Open CV is used to capture video from a webcam and compare it with the trained model to predict the gesture.



  
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# IOT-ENABLED UNDERGROUND DRAINAGE MONITORING SYSTEM IN SEWAGE NETWORKS

A PROJECT REPORT

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## ABSTRACT

India has declared a venture of making 100 keen cities. For making a savvy city one should consider numerous parameters such as keen water, shrewd power, shrewd transportation etc. The underground waste framework is a critical component of urban foundation. It is considered to be city's life saver. Most administration on underground drainage is manual subsequently it isn't effective to have a clean and working underground framework too in such huge cities, it is difficult for the government faculty to find the precise sewer vent which is confronting the issue. In this manner, it is basic to create a framework which can handle underground waste without human mediation. The Underground Seepage includes a sewerage framework, gas pipeline arrange, water pipeline, and sewer vents. This venture depicts different capacities utilized for support and observing of underground waste framework. It gives a framework which is able to screen the water level, water stream and poisonous gasses. On the off chance that the waste framework gets blocked and water floods it can be recognized by the sensor framework. Which sensor data and area will be store in IoT to the comparing overseeing station? This paper points to the degree and examine the genuine time levels of harmful gases. In arrange to guarantee the security of the labourers working beneath such extreme conditions. In the event that levels surpass past edge, it might send an alert on the associated portable gadgets of the approved individuals who are remotely located within the work. In the event that any blockage is experienced, it can be checked with the assistance of web page applications



  
11/07/2021  
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**SMART HELMET FOR CELLPHONE ACCIDENT  
AVOIDANCE FREQUENCY BASED VEHICLE  
CONTROLLING APPROACH ON IoT  
A PROJECT REPORT**

*Submitted by*

<b>GURU AKASH L</b>	<b>410719106033</b>
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<b>SATHISH S B</b>	<b>410719106087</b>

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**MAY 2023**



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**BONOFIDE CERTIFICATE**

Certified that this project report "SMART HELMET FOR CELLPHONE ACCIDENT AVOIDANCE FREQUENCY BASED VEHICLE CONTROLLING APPROACH OM IoT" is the bonafide work of GURU AKASH L , SANJAI V S, SATHISH S B who carried out the project under my supervision.

  
SIGNATURE

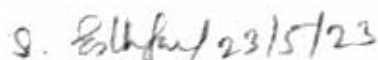
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EXTERNAL EXAMINEE

## Abstract

People choose motorbikes over car as it is much cheaper to run, easier to park and flexible in traffic. In India, more than 37 million people are using two wheelers. Since usage is high, accident percentage of two wheelers are also high compared to four wheelers. Motorcycles have high rate of fatal accidents than four wheelers. The impacts of these accidents are more dangerous when the driver involves in a high-speed accident without wearing helmet. It is highly dangerous and can cause severe deaths. So, wearing a helmet can reduce this number of accidents and may save the life. This paper aims for avoidance of accidents and develop helmet detection system. The proposed system is an intelligent/safety helmet. A module fixed in the helmet, such that, the module will sync with the module fixed on bike and will also ensure that biker has worn Helmet.



  
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**A ZIGBEE IoT-ENABLED TRASH BIN LEVEL  
MONITORING SYSTEM**

**A PROJECT REPORT**

*Submitted by*

<b>DHANUSH D</b>	<b>[410719106024]</b>
<b>PRAVEEN KUMAR E</b>	<b>[410719106079]</b>
<b>PRAVEEN KUMAR P</b>	<b>[410719106080]</b>
<b>RAVIKUMAR P</b>	<b>[410719106081]</b>

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**MAY 2023**



  
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CHENNAI - 601 301

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**BONAFIDE CERTIFICATE**

Certified that this project report "A ZIGBEE IoT-ENABLED TRASH BIN LEVEL MONITORING SYSTEM" is the bonafide work of DHANUSH D. PRAVEEN KUMAR E. PRAVEEN KUMAR P. RAVIKUMAR P who carried out the project under my supervision.

  
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## ABSTRACT

The paper describes an IoT-based solution for monitoring the fill level of trash containers in real-time to improve waste management. The system uses self-powered sensor nodes called Bin Level Monitoring Units (BLMUs) installed in each trash bin, which transmit data via Zigbee and Wi-Fi communication to a central tracking station. Python deep learning algorithms are used to categorize waste as biodegradable or non-biodegradable. This technology aims to help address the problem of improper waste disposal, which leads to environmental pollution and health hazards. By monitoring the fill level of trash containers, waste management authorities can take prompt action to ensure efficient waste clearance.



  
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# SMART DETECTION ROBOT

A PROJECT REPORT

*Submitted by*

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SARITHA A B

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[410719106053]  
[410719106086]

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**IN**

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**MAY 2023**



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ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report "SMART DETECTION ROBOT" is the Bonafide work of JOTHI PRIYA V [410719106042], KRATHIKSHA E [410719106053], SARITHA A B [410719106086] who carried out the project under my supervision.

*J. Devasena*  
23/5/2023  
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College of Engineering, Chennai on .....23/05/2023.....

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23/05/23  
EXTERNAL EXAMINER



*S. Subramanian*  
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## ABSTRACT

The main abstract of a project is to build a cost effective and efficient robotic system, programmed to provide a platform for surveillance purpose, thus acting as a substitute for human in hazardous activities like mining, exploration, patrolling sensitive areas and for various applications that are at a safer distance. By impart intelligent control techniques for the robotic platform, so that it's dynamic performance, in varied applications of path and dimensions tracking, can be further developed. Also, by monitor the movement of the robot through wireless mode of communication. To establish complete transparency of data over Wi-Fi.

The four wheeled robot mechanism, employs differential motor speed control. The concept of weather monitoring is achieved by designing with temperature and humidity sensor to measure temperature and humidity, MQ2 sensor to detect the presence of certain gases, motion sensor to detect nearby motion, ultrasonic sensor to measure the distance to an object. The monitoring duties would be taken care by the camera mounted in the front.



  
PRINCIPAL  
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## **DHANALAKSHMI COLLEGE OF ENGINEERING**

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Tambaram, Chennai 601 301

# Industrial Visit



Vijaykumar T <vijaykumar.t@dce.edu.in>

## Request for industrial visit for your industry

6 messages

Vijaykumar T <vijaykumar.t@dce.edu.in>  
To: rgmttcchennai@gmail.com

Thu, Apr 7, 2022 at 1:11 PM

Dear sir

I am vijayakumar from dhanalakshmi college of engineering . I have planned to visit your bsnl office on 25th april. Total 116 students from ece department

Thanking you

PRO RGMTTC <rgmttcchennai@gmail.com>  
To: Vijaykumar T <vijaykumar.t@dce.edu.in>

Tue, Apr 12, 2022 at 5:31 PM

Dear Sir/Madam,

Thanks for choosing BSNL for your Industrial visit. As per your request mail, we are pleased to offer Industrial visit for your students on **25/04/2022**. Kindly send students details (Name, Department, Year, Gender) as soft copy in excel ,at the earliest, in mail. Only e-certificate will be provided for Industrial visits.

The fees per student will be Rs.200+18% Service Tax(Rs 236).



*[Signature]*  
PRINCIPAL  
DHANALAKSHMI COLLEGE OF ENGINEERING  
CHENNAI - 601 301

BSNL is now offering 10% discount for a group having 26 to 50 students and 20% discount for a group having 51 and above students.

Model Calculation for 116 students:  $116 * \text{Rs.}189/- \text{ (inc Tax)} = \text{Rs.}21,924/- \text{ (20\% Discount)}$

Take a single DD for all the students.(Rs.21,924/-)

(payment mode cash also accepted)

Timing 2 hours 30 mts. Kindly be in time from 1030hrs to 1300 hrs.

Food arrangements should be taken care by students themselves.

For any clarifications feel free to contact us.

Thanks & Regards,  
SDE/PRO, RGMTC, BSNL,

Meenambakkam,  
Chennai-600016.

Mob:9486103734



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[Quoted text hidden]

PRO RGMTC <rgmttcchennai@gmail.com>  
To: Vijaykumar T <vijaykumar.t@dce.edu.in>

Dear Sir/Madam,

  
PRINCIPAL  
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CHENNAI - 601 301

Mon, Apr 25, 2022 at 6:34 PM

Thank you for choosing RGMTTC BSNL for Industrial Visit on 25/04/2022

The students and staff coordinator certificates are attached herewith.

PFA  
Thank you,

Regards,  
JE/PRO  
RGMTTC,BSNL  
Chennai-16

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[Quoted text hidden]

---

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To: Students ECE 2019 <dg.ece2019@dce.edu.in>

Wed, Jul 20, 2022 at 11:57 AM

[Quoted text hidden]

---

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To: "Dr. Sivakumar M" <sivakumar.m@dce.edu.in>

Tue, Aug 15, 2023 at 4:22 PM

[Quoted text hidden]

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Vijaykumar T <vijaykumar.t@dce.edu.in>  
To: "Dr. Sivakumar M" <sivakumar.m@dce.edu.in>

Tue, Aug 15, 2023 at 4:29 PM

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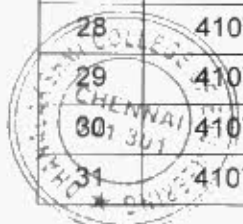


# DHANALAKSHMI COLLEGE OF ENGINEERING

(Approved by AICTE and Affiliated to Anna University)  
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List of students and faculty for Industrial Visit to "BSNL" on 25.04.2022

S.No.	Register Number	Student Name	Year
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2	410720106004	JAYASURYA R	III
3	410720106005	MAHALAKSHMI G	III
4	410720106006	MOHAMMED SAMEER A	III
5	410720106007	MOHARIDHA K	III
6	410720106008	AVULA NARASIMHANAI DU	III
7	410720106009	PENUDHOTA VEERA BRAHMAM	III
8	410720106010	POTLA ACHYUTH KUMAR	III
9	410720106011	POTTURU VENKATESH	III
10	410720106014	SARAVANAN V	III
11	410720106015	SATHISH A	III
12	410720106016	SOORAJ M	III
13	410720106018	SYEDA RUHANAA NARGIS R	III
14	410720106019	YOGESHWARI T K	III
15	410720106301	DUVVURU PAVANI	III
16	410720106303	RAJA RAMANATHAN K	III
17	410721106001	AAKASH R	II
18	410721106003	ADI ABIKRISHNA	II
19	410721106004	AKASH M	II
20	410721106005	AKKULA SRI THARUN	II
21	410721106006	ASHOK KUMARAN N R	II
22	410721106007	AYISHA S	II
23	410721106008	BAIRABATHINA MUNISUDHAKAR	II
24	410721106009	BHARATH J	II
25	410721106010	BHUVANESHWARI R	II
26	410721106011	BHUVANESHWARI S	II
27	410721106012	BODDU NAGESWARI	II
28	410721106013	CHANDRASEKHAR M	II
29	410721106014	CHEBROLU SUBHASH	II
30	410721106015	DAYYALA CHITRA	II
31	410721106016	DEEPAK V	II



  
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32	410721106017	DHANUSH KUMAR V	II
33	410721106019	DIVYA DARSHINI T	II
34	410721106020	GADI HARIPRIYA	II
35	410721106021	GALAM RAMBABU	II
36	410721106022	GALI VASU	II
37	410721106023	GOKUL S	II
38	410721106024	HARIHARAN E	II
39	410721106025	HARI RAM BHASKAR	II
40	410721106026	HEMATH KUMAR NIDHI R	II
41	410721106027	JADAPALLI SAI KIRAN	II
42	410721106028	JANA PRADAP S	II
43	410721106029	KARTHIKEYAN S	II
44	410721106030	KARTHIP J	II
45	410721106031	KAVYA V	II
46	410721106032	KOMMI MANOGNA NAIDU	II
47	410721106033	KONDURU MAHITHA	II
48	410721106034	LAKKALAPUDI BHANU PRASAD	II
49	410721106035	LOKESH G	II
50	410721106036	LOKESH R	II
51	410721106037	MADHESHWARAN A K	II
52	410721106039	MANDATI GURUPRASAD	II
53	410721106040	MOHAMMED SHOAIB KHAN I	II
54	410721106043	PALURU VISHNU VARDHAN	II
55	410721106044	PRAABHASS V D	II
56	410721106045	PRAVEEN KUMAR M	II
57	410721106046	PRIYADHARSHINI P	II
58	410721106047	PUGAZHENTHI R	II
59	410721106048	PUVIYARASU G S	II
60	410721106049	R HARINI	II
61	410721106050	RISHI KUMAR T S L	II
62	410721106051	SANDHIYA P M	II
63	410721106052	SANJAY T	II



  
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64	410721106053	SANTHOSHKUMAR S	II
65	410721106054	SARU DHARSHINI R	II
66	410721106055	SHAIK SHAHUL BAJID	II
67	410721106056	S SIREESHA REDDY	II
68	410721106057	SUNITH KUMAR L	II
69	410721106058	SURYA K	II
70	410721106059	SUSMITHA V	II
71	410721106061	THAMBI KIRANKUMAR	II
72	410721106062	THARUN KUMARAN M	II
73	410721106063	THIRUGABATHINI AKHIL	II
74	410721106064	T MONICA DHARSHINI	II
75	410721106065	TURAKA SIREESHA	II
76	410721106066	VAISHNAVI C	II
77	410721106067	VARANASI SWETHA	II
78	410721106068	VIGNESHWARAN D	II
79	410721106069	YASWANTH A	II
80	410721106070	YATTAPU MADHUSUDHAN	II
81	410721106303	PRATHIK M	II
82	410721106305	YUVARAJ E	II
83	410722106001	AAKASH M	I
84	410722106002	ABDUR RAHMAN S	I
85	410722106003	ANITHA A	I
86	410722106004	BALAKUMARAN G	I
87	410722106005	DEVIPRIYA N B	I
88	410722106006	GIRIRAJAN D	I
89	410722106007	GURU PRASATH A R	I
90	410722106008	HARIBABU N	I
91	410722106009	I VENKAT BABU	I
92	410722106010	JAYA PRAKASH S	I
93	410722106011	JESWIN PAUL WILSON E	I
	410722106012	KISHORE KUMAR S	
	410722106013	MAHASRI M	



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96	410722106014	MANIKANDAN P	
97	410722106015	MANI SANKAR N	
98	410722106017	PRAKASH N	
99	410722106018	PRAVEEN R	
100	410722106019	PRIYADHARSHINI B M	
101	410722106020	RAMYA M	
102	410722106021	SABARINATHAN K	
103	410722106022	SABARI NATHAN P B	
104	410722106023	SAJEET P	
105	410722106024	SANTHOSH KUMAR D	
106	410722106025	SHARMILA K	
107	410722106026	SHIYAMALAN S	
108	410722106027	SHUBHAM KUMAR	
109	410722106028	SURJITH D	
110	410722106029	SURYA R	
111	410722106030	THAMILSELVAN R	
112	410722106031	THARANI M	
113	410722106032	VIGNESH M	
114	410722106033	VIJAYARAJ U	
115	410722243001	ABINAYA E	
116	410722243002	ABINAYA R	

Faculty Accompanying:

- 1) Dr A Devasena, Prof / ECE
- 2) Mr T Vijayakumar, AP/ECE
- 3) Mr A Kumar, AP/ECE
- 4) Ms S Nandhini, AP/ECE

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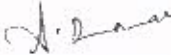


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## Industrial Visit Report

Date of Event	25.04.2022
Name of the Event	Industrial Visit
Organized by	ECE
Name of the Company visited	BSNL
Duration of Event	One Day
Image or Screen shots (If online)	 
Description of Event	<p>Department of Electronics and communication Engineering from Dhanalakshmi college of engineering arranged one day industrial visit for Second to Rajiv Gandhi Memorial Telecom training centre dated 25th April, 2022 for better technical knowledge enhancement of students.</p> <p>Our college management has provided the two buses for Industrial visit. On 25th April, a total of 116 students along with 3 faculties started to visit the BSNL, Meenembakkam from our college campus around 9.00 am. We reached the BSNL Meenambakkam around 10.30 am.</p> <p>Visit is especially important in the field of Engineering as the practice of engineering has an inherent (and unavoidable) impact on society. These programs can be a powerful tool to constitute a positive industrial climate. Overall, the aim of all these visits is to train the students to become familiar with the power generation process. After visiting, students can identify their own efficiency and performance which are important for their career, improving work efficiency and confidence.</p>

  
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