

# **SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY**

Dindigul-Palani Highway,Dindigul-624002

(Accredited by NAAC)

## **REPORT**

ON

**TECHNOLOGY TRAINING IN  
“ROBOTICS,IOT and DRONES”  
FOR II YEAR ECE STUDENTS**

**DURATION:13.02.2023 - 17.02.2023**

SUBMITTED by

**Dr.M.JEYALAKSHMI,ASP/ECE**

**Dr.K.GANAPRIYA,AP/ECE**

**SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY**

**Dindigul-624002**



**SUBMITTED ON 28.02.2023**

A handwritten signature in black ink, appearing to read "R. Senthil Kumaran".

**Dr.D.SENTHIL KUMARAN, M.E., Ph.D.,(NUS)  
Principal  
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Kuttathupatti Village, Sindhalagundu (Po),  
Palani Road, Dindigul - 624 002.**

S.NO	CHAPTER NAME	PAGE NUMBER
1	Circular	2
2	Brochure & Approval Letter	3
3	Syllabus	4
4	Student Attendance	5
5	Event Report	7
6	Assessment Question Paper	9
7	Assessment Marks	13
8	Feedback	16
9	Sample Certificates	19



  
 Dr.D.SENTHIL KUMARAN, M.E., Ph.D.,(NUS)  
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## SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

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Email:[ssmictdgl@gmail.com](mailto:ssmictdgl@gmail.com) , Website: [www.ssmiet.ac.in](http://www.ssmiet.ac.in)

### Department of ECE

#### CIRCULAR

27.01.2023

Department of ECE has planned to conduct "Technical training on Robotics, Drones & IoT" from 06.02.23 to 10.02.23 for second year ECE students. The main objective of this training is to create awareness on methodology of manufacturing products to meet the emerging demands in Industries. Henceforth, students are requested to attend this technical training and get benefitted.

**Venue** : Networks Lab

**Resource Person:** **Balaji Varadhan**  
Program Co-ordinator  
Village Technology School  
Chennai.

1. *M.Jeyalakshmi*  
2. *K.Ganapriya*  
Coordinators

1.Dr.M.Jeyalakshmi  
2.Dr.K.Ganapriya

1. *A.Geetha*  
2. *G.Saranya*  
Faculty Incharge

Mrs.A.Geetha  
Mrs.G.Saranya



Dr. S. Karthigai Lakshmi

HOD/ECE

Dr. D.Senthil Kumaran

PRINCIPAL



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Principal  
SSM Institute of Engineering and Technology  
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Puliappi Road, Dindigul - 624 002.

**DEPARTMENT OF ECE**

**ORGANIZES**

**“Technology Training on Robotics, Drones & IoT”**

**RESOURCE PERSON**



**BALAJI VARADHAN**  
**Program Co-ordinator**  
**Village Technology School**  
**Chennai.**



**Date: 13-02-2023 to 17-02-2023**

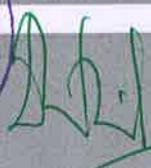
**Time : 09.00am -04.00 pm**

**Venue: Network Lab**

**Co-ordinators**  
**Dr. M.Jeyalakshmi**  
**Dr.K.Ganapriya**

**Faculty Incharge**  
**Mrs.A.Geetha**  
**Mrs.G.Saranya**

**HoD**  
**Dr.S.Karthigai Lakshmi**



**Principal**  
**Dr. D. Senthil Kumaran**

**Dr.D.SENTHIL KUMARAN, M.E., P. - V.V.G.**  
**Principal**  
**SSM Institute of Engineering and Technology**  
**Kuttathupatti Village, Sindhalgundu (Po),**  
**Palani Road, Dindigul - 624 002.**

**All are cordially invited**

## SYLLABUS

Introduction to Internet of Things (IoT), Smart IoT device. IoT computing. IoT components. AI & IoT concept, Embedded board & Programming Languages. Introduction to Arduino. Basic I/O. IoT simulator. Digital Input-Output. Analog Input-Output. IoT connectivity. IoT application. Tool and supplements. IoT network protocol. Setup docker desktop. IoT applications. Case Study: Temp/Humid Monitoring and Control Node-RED Simulation/ Node-RED Brain Process / Databases / Grafana. Introduction to Robotics. Robot Types. Robot Mechanics. Robot Controller. Sensors and actuators. Robot Kinematics. Concepts of kinematics. Notation and Matrix Representation.

## **OUTCOME:**

To give experience of deep learning and it will be classified into individual hackathon projects, small group projects, and big bang group projects



  
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## DEPARTMENT OF ECE

Technical training

On

### Robotics,Drones & IoT

YEAR/SEMESTER/SECTION:III/IV/ECE-A

Sl. No	REGISTER NUMBER	NAME OF THE STUDENT	13/02/2023		14/02/2023		15/02/2023		16/02/2023		17/02/2023	
			FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1.	922121106001	AAKASH RAJ S	S. AAKASH RAJ									
2.	922121106002	AARTHI A.M	S. AARTHI A.M	S. AARTHI A.M	S. AARTHI A.M	S. AARTHI A.M	S. AARTHI A.M	S. AARTHI A.M	S. AARTHI A.M	S. AARTHI A.M	S. AARTHI A.M	
3.	922121106003	ALMAS MARIYAS S	S. ALMAS MARIYAS S	S. ALMAS MARIYAS S	S. ALMAS MARIYAS S	S. ALMAS MARIYAS S	S. ALMAS MARIYAS S	S. ALMAS MARIYAS S	S. ALMAS MARIYAS S	S. ALMAS MARIYAS S	S. ALMAS MARIYAS S	
4.	922121106004	AMALARANI S	S. AMALARANI S	S. AMALARANI S	S. AMALARANI S	S. AMALARANI S	S. AMALARANI S	S. AMALARANI S	S. AMALARANI S	S. AMALARANI S	S. AMALARANI S	
5.	922121106005	ANGEL PAULINA B	S. ANGEL PAULINA B.									
6.	922121106006	BALAKRISHNAN S	S. BALAKRISHNAN S	S. BALAKRISHNAN S	S. BALAKRISHNAN S	S. BALAKRISHNAN S	S. BALAKRISHNAN S	S. BALAKRISHNAN S	S. BALAKRISHNAN S	S. BALAKRISHNAN S	S. BALAKRISHNAN S	
7.	922121106008	CHINTHAKKUINIYAN M	S. CHINTHAKKUINIYAN M	S. CHINTHAKKUINIYAN M	S. CHINTHAKKUINIYAN M	S. CHINTHAKKUINIYAN M	S. CHINTHAKKUINIYAN M	S. CHINTHAKKUINIYAN M	S. CHINTHAKKUINIYAN M	S. CHINTHAKKUINIYAN M	S. CHINTHAKKUINIYAN M	
8.	922121106009	DIANASHREE R.	S. DIANASHREE R.	S. DIANASHREE R.	S. DIANASHREE R.	S. DIANASHREE R.	S. DIANASHREE R.	S. DIANASHREE R.	S. DIANASHREE R.	S. DIANASHREE R.	S. DIANASHREE R.	
9.	922121106010	DIVYAN N	N. DIVYAN N	N. DIVYAN N	N. DIVYAN N	N. DIVYAN N	N. DIVYAN N	N. DIVYAN N	N. DIVYAN N	N. DIVYAN N	N. DIVYAN N	
10.	922121106011	DIVYYA DHARSHINI K	S. DIVYYA DHARSHINI K	S. DIVYYA DHARSHINI K	S. DIVYYA DHARSHINI K	S. DIVYYA DHARSHINI K	S. DIVYYA DHARSHINI K	S. DIVYYA DHARSHINI K	S. DIVYYA DHARSHINI K	S. DIVYYA DHARSHINI K	S. DIVYYA DHARSHINI K	
11.	922121106012	DIVYADHARSHINI K	S. DIVYADHARSHINI K	S. DIVYADHARSHINI K	S. DIVYADHARSHINI K	S. DIVYADHARSHINI K	S. DIVYADHARSHINI K	S. DIVYADHARSHINI K	S. DIVYADHARSHINI K	S. DIVYADHARSHINI K	S. DIVYADHARSHINI K	
12.	922121106013	DIVYYA SRI J S	S. DIVYYA SRI J S	S. DIVYYA SRI J S	S. DIVYYA SRI J S	S. DIVYYA SRI J S	S. DIVYYA SRI J S	S. DIVYYA SRI J S	S. DIVYYA SRI J S	S. DIVYYA SRI J S	S. DIVYYA SRI J S	
13.	922121106014	FARIATH NASEEM J	J. FARIATH NASEEM J	J. FARIATH NASEEM J	J. FARIATH NASEEM J	J. FARIATH NASEEM J	J. FARIATH NASEEM J	J. FARIATH NASEEM J	J. FARIATH NASEEM J	J. FARIATH NASEEM J	J. FARIATH NASEEM J	
14.	922121106015	GOKULRAMA NATH K	K. GOKULRAMA NATH K	K. GOKULRAMA NATH K	K. GOKULRAMA NATH K	K. GOKULRAMA NATH K	K. GOKULRAMA NATH K	K. GOKULRAMA NATH K	K. GOKULRAMA NATH K	K. GOKULRAMA NATH K	K. GOKULRAMA NATH K	
15.	922121106016	GOWTHAM K	K. GOWTHAM K	K. GOWTHAM K	K. GOWTHAM K	K. GOWTHAM K	K. GOWTHAM K	K. GOWTHAM K	K. GOWTHAM K	K. GOWTHAM K	K. GOWTHAM K	

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		EN	AN	EN	AN	EN	AN	EN	AN	EN	AN	EN	AN
16.	922121106017	GOWTHAM M		M.Goutham	N.Goutham								
17.	922121106018	HAMEED HUSAIN M		M.Hameed									
18.	922121106020	JAMUNA G		Mussoor Husain									
19.	922121106021	JEEVAA S		Yamuna Jamuna Jamuna									
20.	922121106022	JEYA SEELANS		S.Jeyaswari S.Jeyaswari S.Jeyaswari									
21.	922121106023	KABILAN R		V.R.Kabilan V.R.Kabilan									
22.	922121106024	KAJAL KRISHNA C		Kajal Krishnan Kajal Krishnan Kajal Krishnan									
23.	922121106025	KALPANA S		S.Kalpana S.Kalpana S.Kalpana									
24.	922121106026	KAMATCHI VELAN M		M.Kamatchi M.Kamatchi M.Kamatchi									
25.	922121106027	KAVIYA M	12.11.2003	M.Kaviya M.Kaviya M.Kaviya									
26.	922121106028	KAVIYA M	6.3.2004	M.Kavya M.Kavya M.Kavya									
27.	922121106029	KEERTHANA U		Keerthana Keerthana Keerthana									
28.	922121106030	KEERTHIVARMAN M		K.E.P.M. Keertivaram Keertivaram									
29.	922121106031	KIRAN CHELLAPERUMAL G		G.Kiran G.Kiran G.Kiran									
30.	922121106032	KIRUTHIGA M		M.Kiruthiga Kiruthiga Kiruthiga									
31.	922121106033	KISHORE M		M.Kishore M.Kishore M.Kishore									
32.	922121106034	KISHORE KANNAN H		H.Kishore H.Kishore H.Kishore									
33.	922121106035	LAKSHMI PRIYAP		P.Lakshmi P.Lakshmi P.Lakshmi									
34.	922121106036	LATHA K		P.Latha P.Latha P.Latha									
35.	922121106037	LIJESHI KARTHIK V		V.Lijeshi V.Lijeshi V.Lijeshi									
36.	922121106038	LISHIAR		R.Lisha R.Lisha R.Lisha									
37.	922121106301	B.MARIBALAN		M.Vijay M.Vijay M.Vijay									
38.	922121106303	VIJAY V		M.Vijay M.Vijay M.Vijay									

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Sl. No	REGISTER NUMBER	NAME OF THE STUDENT	13/02/2023			14/02/2023			15/02/2023			16/02/2023			17/02/2023		
			FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	
1.	922121106039	LOGESH K	K. L.	K. L.	K. L.	K. L.	K. L.	K. L.	K. L.	K. L.	K. L.	K. L.	K. L.	K. L.	K. L.	K. L.	
2.	922121106040	MADHU BALAS	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	
3.	922121106041	MAHALAKSHMI T	anisha	T. Mahalakshmi													
4.	922121106042	MAKARISH M	Palvi	Palvi	Palvi	Palvi	Palvi	Palvi	Palvi	Palvi	Palvi	Palvi	Palvi	Palvi	Palvi	Palvi	
5.	922121106043	MANASVINI S A	S. Manasvini	S. Manasvini	S. Manasvini	S. Manasvini	S. Manasvini	S. Manasvini	S. Manasvini	S. Manasvini	S. Manasvini	S. Manasvini	S. Manasvini	S. Manasvini	S. Manasvini	S. Manasvini	
6.	922121106044	ABINASH.R	R.	R.	R.	R.	R.	R.	R.	R.	R.	R.	R.	R.	R.	R.	
7.	922121106045	MARGRATE SNEKA J	J. S.	J. S.	J. S.	J. S.	J. S.	J. S.	J. S.	J. S.	J. S.	J. S.	J. S.	J. S.	J. S.	J. S.	
8.	922121106046	MARIA CHRISTY J	J. Maria	J. Maria	J. Maria	J. Maria	J. Maria	J. Maria	J. Maria	J. Maria	J. Maria	J. Maria	J. Maria	J. Maria	J. Maria	J. Maria	
9.	922121106047	MATHAN RAJ C	C. Mathan	C. Mathan	C. Mathan	C. Mathan	C. Mathan	C. Mathan	C. Mathan	C. Mathan	C. Mathan	C. Mathan	C. Mathan	C. Mathan	C. Mathan	C. Mathan	
10.	922121106048	MOHAMED MUFASSAL M	M. Mufassal	M. Mufassal	M. Mufassal	M. Mufassal	M. Mufassal	M. Mufassal	M. Mufassal	M. Mufassal	M. Mufassal	M. Mufassal	M. Mufassal	M. Mufassal	M. Mufassal	M. Mufassal	
11.	922121106049	MOHAMED MUSTHAQ B	B. Musthaq	B. Musthaq	B. Musthaq	B. Musthaq	B. Musthaq	B. Musthaq	B. Musthaq	B. Musthaq	B. Musthaq	B. Musthaq	B. Musthaq	B. Musthaq	B. Musthaq	B. Musthaq	
12.	922121106050	MOHAMED SULAIMAN A	A. Sulaiman	A. Sulaiman	A. Sulaiman	A. Sulaiman	A. Sulaiman	A. Sulaiman	A. Sulaiman	A. Sulaiman	A. Sulaiman	A. Sulaiman	A. Sulaiman	A. Sulaiman	A. Sulaiman	A. Sulaiman	
13.	922121106051	MOHANA PRIYAS	Priyas	Priyas	Priyas	Priyas	Priyas	Priyas	Priyas	Priyas	Priyas	Priyas	Priyas	Priyas	Priyas	Priyas	
14.	922121106052	MUKESH KUMAR K	K. Mukesh	K. Mukesh	K. Mukesh	K. Mukesh	K. Mukesh	K. Mukesh	K. Mukesh	K. Mukesh	K. Mukesh	K. Mukesh	K. Mukesh	K. Mukesh	K. Mukesh	K. Mukesh	
15.	922121106053	MURALI KARTHIK V	V. Murali	V. Murali	V. Murali	V. Murali	V. Murali	V. Murali	V. Murali	V. Murali	V. Murali	V. Murali	V. Murali	V. Murali	V. Murali	V. Murali	

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		FN	AN	FN	AN	FN	AN	FN	FN	AN	FN	FN	AN
16.	922121106054	MURUGANAND	R	R. Regh	R. Regh A. S.	R. Regh	R. Regh R. Regh	R. Regh	R. Regh	R. Regh R. Regh	R. Regh	R. Regh	R. Regh
17.	922121106055	MUTHUVEL M		Musth -	Musth	Musth	Musth Musth	Musth	Musth	Musth Musth	Musth	Musth	Musth
18.	922121106056	NAGAPRIYAS		Nagar -	Nagar -	Nagar -	Nagar - Nagar	Nagar	Nagar	Nagar - Nagar	Nagar	Nagar	Nagar
19.	922121106057	NATRAYAN R		R. Natrajan R. Natrajan	R. Natrajan	R. Natrajan	R. Natrajan R. Natrajan	R. Natrajan	R. Natrajan	R. Natrajan			
20.	922121106058	NAVEENA N		Naveena	Naveena	Naveena	Naveena Naveena	Naveena	Naveena	Naveena Naveena	Naveena	Naveena	Naveena
21.	922121106059	NAVEENKUMAR J		Navaj J. Navaj	Navaj J. Navaj	Navaj J. Navaj	Navaj J. Navaj	Navaj	Navaj	Navaj J. Navaj	Navaj	Navaj	Navaj
22.	922121106060	NAVEEN KUMAR R		J. P. N.	J. P. N.	J. P. N.	J. P. N.	J. P. N.	J. P. N.	J. P. N.	J. P. N.	J. P. N.	J. P. N.
23.	922121106061	NIKITHA I		Nikitha	Nikitha	Nikitha	Nikitha Nikitha	Nikitha	Nikitha	Nikitha Nikitha	Nikitha	Nikitha	Nikitha
24.	922121106062	PANDI SAKTHIVEL R		Pandi	Pandi	Pandi	Pandi Pandi	Pandi	Pandi	Pandi Pandi	Pandi	Pandi	Pandi
25.	922121106063	PAVITHRA N		PaVithra	PaVithra	PaVithra	PaVithra PaVithra	PaVithra	PaVithra	PaVithra PaVithra	PaVithra	PaVithra	PaVithra
26.	922121106064	POOJAM		M. Pooja	M. Pooja	M. Pooja	M. Pooja M. Pooja	M. Pooja	M. Pooja	M. Pooja M. Pooja	M. Pooja	M. Pooja	M. Pooja
27.	922121106065	PRANAV SANKAR GR		Pranav G. R. Sankar	Pranav G. R. Sankar	Pranav G. R. Sankar	Pranav G. R. Sankar Pranav G. R. Sankar	Pranav G. R. Sankar	Pranav G. R. Sankar	Pranav G. R. Sankar Pranav G. R. Sankar	Pranav G. R. Sankar	Pranav G. R. Sankar	Pranav G. R. Sankar
28.	922121106066	P.PRASANNA		P. Prasanna	P. Prasanna	P. Prasanna	P. Prasanna P. Prasanna	P. Prasanna	P. Prasanna	P. Prasanna P. Prasanna	P. Prasanna	P. Prasanna	P. Prasanna
29.	922121106067	PREETHI H		Preethi H	Preethi H	Preethi H	Preethi H. Preethi H	Preethi H.	Preethi H.	Preethi H. Preethi H.	Preethi H.	Preethi H.	Preethi H.
30.	922121106068	PRIYAM		M. Priya M. Priya	M. Priya	M. Priya	M. Priya M. Priya	M. Priya	M. Priya	M. Priya			
31.	922121106069	PRIYADHARSHINI CM		M. Priyadharshini CM	M. Priyadharshini CM	M. Priyadharshini CM	M. Priyadharshini CM	M. Priyadharshini CM	M. Priyadharshini CM	M. Priyadharshini CM	M. Priyadharshini CM	M. Priyadharshini CM	M. Priyadharshini CM
32.	922121106070	PRIYADHARSHINI R		R. Priya R. Priya	R. Priya	R. Priya	R. Priya R. Priya	R. Priya	R. Priya	R. Priya			
33.	922121106071	PRIYA LAKSHMI M		M. Priya Lakshmi M	M. Priya Lakshmi M	M. Priya Lakshmi M	M. Priya Lakshmi M	M. Priya Lakshmi M	M. Priya Lakshmi M	M. Priya Lakshmi M			
34.	922121106072	RAMACHANDRANG		G. Ramachandran	G. Ramachandran	G. Ramachandran	G. Ramachandran	G. Ramachandran	G. Ramachandran	G. Ramachandran	G. Ramachandran	G. Ramachandran	G. Ramachandran
35.	922121106073	RIGNESHWAR C		C. Rigneshwar	C. Rigneshwar	C. Rigneshwar	C. Rigneshwar	C. Rigneshwar	C. Rigneshwar	C. Rigneshwar	C. Rigneshwar	C. Rigneshwar	C. Rigneshwar
36.	922121106074	ROBIN J J		J. J. Robin	J. J. Robin	J. J. Robin	J. J. Robin	J. J. Robin	J. J. Robin	J. J. Robin	J. J. Robin	J. J. Robin	J. J. Robin
37.	922121106302	L THARUNIKUMAR		L. Tharunikumar	L. Tharunikumar	L. Tharunikumar	L. Tharunikumar	L. Tharunikumar	L. Tharunikumar	L. Tharunikumar	L. Tharunikumar	L. Tharunikumar	L. Tharunikumar
38.	922121106304	S.VISHWANATHAN		S. Vishwanathan	S. Vishwanathan	S. Vishwanathan	S. Vishwanathan	S. Vishwanathan	S. Vishwanathan	S. Vishwanathan	S. Vishwanathan	S. Vishwanathan	S. Vishwanathan

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## DEPARTMENT OF ECE Technical training

### On Robotics,Drones & IoT

YEAR/SEMESTER/SECTION:III/IV/ECE-C

Sl. No	REGISTER NUMBER	NAME OF THE STUDENT	13/02/2023		14/02/2023		15/02/2023		16/02/2023		17/02/2023	
			FN	AN								
1.	922121106075	SABITHA JONES M	Sabitha	Saby								
2.	922121106076	SAI AISHWARYA G V	G.V.Sai	A.T.Sai	G.V.Sai	A.T.Sai	G.V.Sai	A.T.Sai	G.V.Sai	A.T.Sai	G.V.Sai	
3.	922121106077	SANJEEVIM	Sanjeevi	Muthu								
4.	922121106078	SANJITHA FATHIMA S	Santhi	Fathima								
5.	922121106079	SANTHI A	A.Santhi									
6.	922121106080	SANTHOSH R	R.Santhosh									
7.	922121106081	SARATHI V	V.Sarathi									
8.	922121106082	SASHMITHA SHREEM	AB									
9.	922121106083	SATHISH KUMARS	S.Sathish									
10.	922121106084	SATHYADEVI B	B.Sathyadevi									
11.	922121106085	SELVA MADHESVARAN R	R.Selva									
12.	922121106086	SENTHIL NATHAN M	M.Senthil									
13.	922121106087	SHANMUGAPRIYAS	Shanmugapriya									
14.	922121106088	SHREENITHI K	K.Shreenithi									
15.	922121106089	SIBISUDHAN R	R.Shibisudhan									

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16.	922121106090	SIVASANKARI K											
17.	922121106091	SONAISAKTHI M											
18.	922121106092	SOORIYA K											
19.	922121106093	SRIRAM M											
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21.	922121106095	SUBASH NATRAYAN R M											
22.	922121106096	SUBHA N											
23.	922121106097	SUBHASHINI N											
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35.	922121106110	VIKASHINI K											
36.	922121106111	VISHNU PRIYAR											
37.	922121106112	YAKSHAGARA J A G											
38.	922121106113	YUVASRI M											

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## REPORT DAY 1

- ❖ In that session the trainers introduced themselves and explained about their organization namely "Village Technology School". After that they explained that why they came to our college and they revealed that they going to organize work shop in our college for our department ECE.
- ❖ Then the informational ideas about robotics and their carrier are given. After sometimes we learned about the basic components like gear motors, Arduino board, etc.
- ❖ Students learned basic applications of robotics and also the application of each and every component what we are using in that workshop on that session. They are very informative and we noted it for our future purposes.
- ❖ After explanations, they revealed that ten projects. Namely,
  - Bluetooth controlled robot
  - Obstacle avoiding robot
  - Line follower robot
  - Hand gesture robot
  - Automatics plant water sprayer
  - Biometric entry system
  - Voice control robot (lillibot)
  - Autonomous robot(lillibot)
  - Drone
- ❖ Above mentioned projects applications are explained by them.

## DAY 2

- ❖ On that day students started to project under the surveillance of our trainer. Next day students began to understand the basics of our projects. Trainer gave the components to understand basic program from Arduino software and how to upload them. First, they did the basic program called blink. We learned about that software then learned to use it.
- ❖ Few minutes later they finished that blink project and understand how it works. After few hours they finished both work and combined it to one.
- ❖ Then the connections are given to the Arduino board and the software is successfully uploaded in the board.

## DAY 3

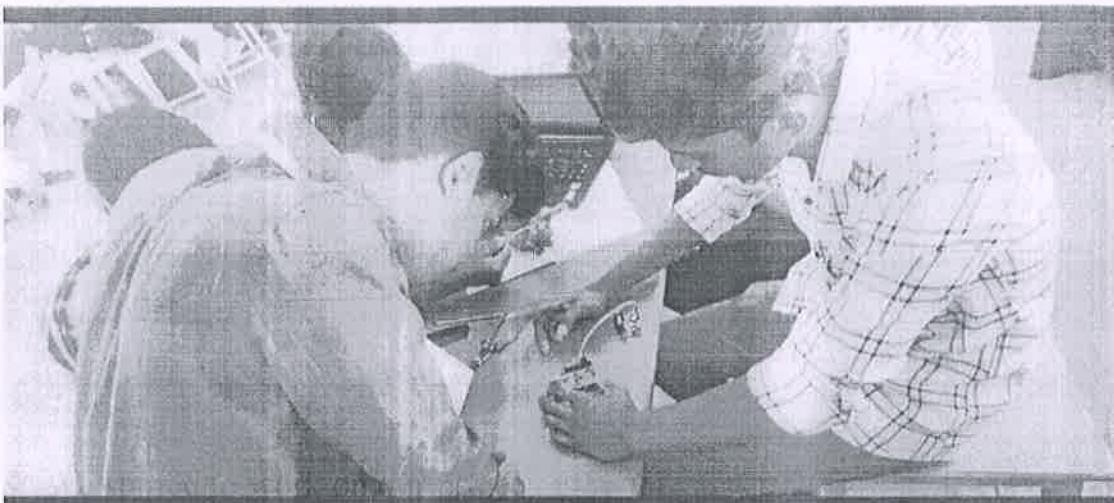
- ❖ We started the day with individual project we did the project named as Bluetooth controlled robot modal.
- ❖ The components required for this project are distributed by the trainer and the instruction were given by him.



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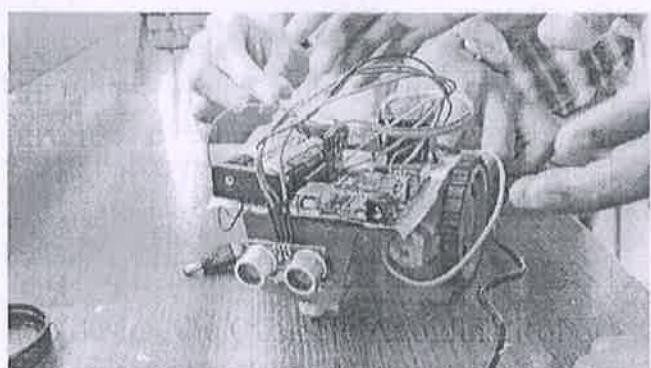
- ❖ We started to work on our project.
- ❖ Team NANO separated within the team to work fast. 5 members works with software and another 5 works with hardware.



- ❖ When software finishes their work, they come to the software team for checking. Then the connections are given as per the instructions given by the instructor. After few minutes our project completed and the checking is successfully done. That session is very useful.

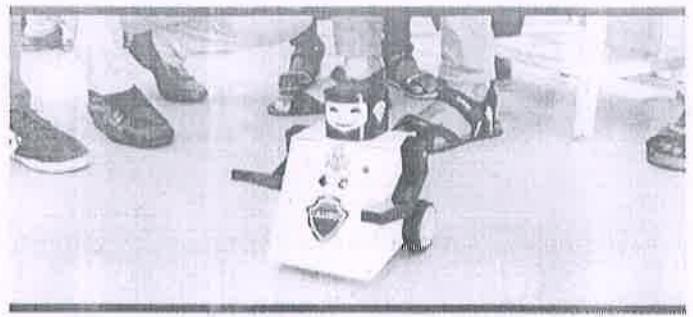
#### DAY 4

- ❖ On that day students first instructed to design the Obstacle Avoiding Robot model. Next the instructor gave all the component needed for that project and he also given the instruction about the project.
- ❖ Students are exchanged the member who not done the hardware part and also exchanged the members for software part inside the team. Same procedure followed for this project also.
- ❖ When we finished the software part, it is given for checking to the hardware section. Then the connections are given as per the instruction given by the instructor.
- ❖ As we have moved to the next project of LILIPOT. As it is voice control robot which is controlled by voice command. students have assemble the parts as per the circuit diagram and we have programmed the code to the Arduino board. Finally, the robot is worked as per the command and runned well.



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## DAY 5

### **PROJECT DRONE**

- ❖ Drones are small remotely controlled aerial vehicles, i.e., they are unmanned aerial vehicles.
- ❖ They look like helicopters or reconnaissance aircraft and, without a doubt, one of their strengths is the many different applications for which they can be used.
- ❖ UAVs were most often associated with the military. They were initially used for anti-aircraft target practice, intelligence gathering and, more controversially, as weapons platforms. Drones are now also used in a range of civilian roles, including the following:
  - search and rescue
  - surveillance
  - traffic monitoring
  - weather monitoring
  - firefighting
  - personal use
  - drone-based photography
  - videography
  - agriculture
  - delivery services



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#### ❖ Advantages of UAV Drones

- Apart from taking on dangerous tasks, drones can also monitor areas that do not necessarily pose a risk to human workers.
  - Still, the reliance on human workers can add a considerable margin of error and accuracy.
- ❖ It have a port to get the data and one port for power supply.

#### CONCLUSION:

The given Projects are done by us are worked successfully and it was demonstrates to the trainers and to the visitors and Explained well. students have conclude that this technology training were useful to them .



A handwritten signature in black ink, appearing to read "D. Senthil Kumaran".

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**SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY,Dindigul**  
**DEPARTMENT OF ECE**  
**Academic Year |2022-2023|**  
**Namelist**                   **Sec:II ECE A ,B,C**

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2	922121106002	AARTHI A.M
3	922121106003	ALMAS MARJIYA S
4	922121106004	AMALARANI S
5	922121106005	ANGEL PAULINA .B
6	922121106006	BALAKRISHNAN S
7	922121106008	CHINTHAIKKU INIYAN M
8	922121106009	DHANASHREE R
9	922121106010	DHIVYA N
10	922121106011	DHIVYA DHARSHINI B
11	922121106012	DIVYADHARSHINI K
12	922121106013	DIVYA SREE S
13	922121106014	FARHATH NASEEM J
14	922121106015	GOKULRAMNATH K
15	922121106016	GOWTHAM K
16	922121106017	GOWTHAM M
17	922121106018	HAMEED HUSAIN M
18	922121106020	JAMUNA G
19	922121106021	JEEVA S
20	922121106022	JEYA SEELAN S
21	922121106023	KABILAN R
22	922121106024	KAJAL KRISHNA C
23	922121106025	KALPANA S
24	922121106026	KAMATCHI VELAN M
25	922121106027	KAVIYA M 12.11.2003
26	922121106028	KAVIYA M 6.3.2004
27	922121106029	KEERTHANA U
28	922121106030	KEERTHIVARMAN M
29	922121106031	KIRAN CHELLAPERUMAL G
30	922121106032	KIRUTHIGA M
31	922121106033	KISHORE M
32	922121106034	KISHORE KANNAN H
33	922121106035	LAKSHMI PRIYA P
34	922121106036	LATHA K
35	922121106037	LINESH KARTHIK V



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38	922121106303	VIJAY
39	922121106039	LOGESH K
40	922121106040	MADIU BALAS
41	922121106041	MAHALAKSHMI I
42	922121106042	MAKARISH M
43	922121106043	MANASVINI S A
44	922121106044	ABINASH.R
45	922121106045	MARGRATE SNEKA J
46	922121106046	MARIA CHRISTY J
47	922121106047	MATHAN RAJ.C
48	922121106048	MOHAMED MUFASSAL
49	922121106049	MOHAMED MUSTHAQ
50	922121106050	MOHAMED SULAIMAN
51	922121106051	MOHANA PRIYA S
52	922121106052	MUKESHI KUMAR K
53	922121106053	MURALI KARTHIK V
54	922121106054	MURUGANANDAM R
55	922121106055	MUTHUVEL M
56	922121106056	NAGAPRIYA S
57	922121106057	NATRAYAN R
58	922121106058	NAVEENA N
59	922121106059	NAVEENKUMAR J
60	922121106060	NAVEEN KUMAR R
61	922121106061	NIKITHA I
62	922121106062	PANDI SAKTHIVEL R
63	922121106063	PAVITHRA N
64	922121106064	POOJA M
65	922121106065	PRANAV SANKAR G R
66	922121106066	P.PRASANNA
67	922121106067	PREETHI H
68	922121106068	PRIYA M
69	922121106069	PRIYADHARSHINI C M
70	922121106070	PRIYADHARSHINI R
71	922121106071	PRIYA LAKSHMI M
72	922121106072	RAMACHANDRAN G
73	922121106073	RIGNESHWAR C
74	922121106074	ROBIN J J
75	922121106302	L.THARUNKUMAR
76	922121106304	S.VISHWANATHAN
77	922121106075	SABITHA JONES M



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79	922121106077	SANJEEVI M
80	922121106078	SANJITHA FATHIMA S
81	922121106079	SANTHI A
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# SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to Anna University, Chennai Accredited by NAAC/CEEE. MECH - NBA Accredited)

Dindigul - Palani Highway, Dindigul - 624 002

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Name:  
Reg no:  
Year/sec/sem:

### MCQ

**1. The Main Objective(s) Of Industrial Robot Is To**

- (A) To minimise the labour requirement
- (B) To increase productivity
- (C) To enhance the life of production machines
- (D) All of the above

**2-The following is true for a Robot and NC Machine**

- (A) Similar power drive technology is used in both
- (B) Different feedback systems are used in both
- (C) Programming is same for both
- (D) All of the above

**3. Robot is derived from Czech word**

- (A) Rabota
- (B) Robota
- (C) Rebota
- (D) Ribota

**4.A Robot is a**

- (A) Programmable
- (B) Multi functional manipulator
- (C) Both (A) and (B)
- (D) None of the above

**5-Match the following**

Robot part	Function
a. Manipulator arm	1. For holding a piece or tool
b. Controllers	2. Move the manipulator arm and end effector
c. Drives	3. Number of degrees of freedom of movement
d. Gripper	4. Delivers commands to the actuators

- (A) a-1, b-4, c-2, d-3
- (B) a-3, b-4, c-2, d-1
- (C) a-3, b-2, c-4, d-1
- (D) a-4, b-3, c-2, d-1

**6. Drives are also known as**

- (A) Actuators
- (B) Controller
- (C) Sensors
- (D) Manipulator

**7. Clockwise of Anti clockwise rotation about the vertical axis to the perpendicular arm is provided through**

- (A) Shoulder swivel
- (B) Elbow extension



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8-Rigid movement fin & only to the manipulator arm is provided by

- (A) Elbow joint
- (B) Wrist bend
- (C) Wrist swivel
- (D) Wrist yaw

9-Industrial Robots are generally designed to carry which of the following coordinate system(s).

- (A) Cartesian coordinate systems
- (B) Polar coordinate systems
- (C) Cylindrical coordinate system
- (D) All of the above

10-The Robot designed with Cartesian coordinate systems has

- (A) Three linear movements
- (B) Three rotational movements
- (C) Two linear and one rotational movement
- (D) Two rotational and one linear movement

11-The Robot designed with Polar coordinate systems has

- (A) Three linear movements
- (B) Three rotational movements
- (C) Two linear and one rotational movement
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12-The Robot designed with cylindrical coordinate systems has

- (A) Three linear movements
- (B) Three rotational movements
- (C) Two linear and one rotational movement
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13-Which of the following work is done by General purpose robot?

- (A) Part picking
- (B) Welding
- (C) Spray painting
- (D) All of the above

14-The following drive is used for lighter class of Robot.

- (A) Pneumatic drive
- (B) Hydraulic drive
- (C) Electric drive
- (D) All of the above

15-Internal state sensors are used for measuring \_\_\_\_\_ of the end effector.

- (A) Position
- (B) Position & Velocity
- (C) Velocity & Acceleration
- (D) Position, Velocity & Acceleration

16-Which of the following sensors determines the relationship of the robot and its environment and the objects handled by it

- (A) Internal State sensors
- (B) External State sensors
- (C) Both (A) and (B)
- (D) None of the above

17-Which of the following is not a programming language for computer controlled robot?

- (A) AMU
- (B) VAL
- (C) RAIL
- (D) HELP

18-In which of the following operations Continuous Path System is used

- (A) Pick and Place
- (B) Loading and Unloading



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14. Who first introduced the word “robot”?

- (A) Isaac Asimov
- (B) Karel Capek
- (C) Isaac Newton
- (D) R2-D2

20. Where are tethered robots used most often?

- (A) In an industrial plant
- (B) In a student robot
- (C) In military applications
- (D) In automotive applications

**TOTAL:20**

**ANSWERS:**

1-(B), 2-(C), 3-(D), 4-(A), 5-(B), 6-(A), 7-(C), 8-(A), 9-(D), 10-(A), 11-(D), 12-(C), 13-(D), 14-(A),  
15-(D), 16-(C), 17-(A), 18-(C), 19-(B), 20-(A)



A handwritten signature in black ink, appearing to read "Dr. D. Senthil Kumaran".

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## VALUE ADDED COURSE ON ROBOTICS &amp; DRONES

## MULTIPLE CHOICE QUESTIONS

YEAR II

PAGE 70

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(A) a-1, b-3, c-2, d-1

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(C) Arm sweep

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R.D.

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11-The Robot designed with Polar coordinate systems has

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(A) AMU

(B) VAF

(C) RAII

(D) HELP

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(B) Loading and Unloading

(C) Continuous welding

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16/20  
K

TOTAL: 20



*Raj*  
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## SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

Sindalagundu post, Dindigul-624002, Tamilnadu. Ph:0451-2448800.

### Department of Electronics and Communication Engineering

#### Technical Training on Robotics, Drones and IoT

February 13 – 17 ,2023

#### FEEDBACK FORM

Date: 17.02.2023

Name of the Participant: M CHINTHAI KIRNIYAN

Year/Semester/Section: II / 4 / A

Mail ID: Chinthakkirniyan@gmail.com

S.No	Question	Excellent	Good	Satisfactory
1	How would you rate the hands-on activities?	/		
2	Whether your expectation gets satisfied	/		
3	Whether the session was interactive		/	
4	Knowledge gained from this technical training is	/		
5	Did the training enlighten your mind		/	

What kind of training would you like to include in future?

PCB Designing and IOT and Drone technology

In particular, what was effective, meaningful and memorable to you?

DRONE PROJECT was great we can't get chances like this so, this chance was greatful and Excellent

Any other suggestions

We would like to have more technology training like this.



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M.Chinthakkirniyan  
Signature of the Participant

## Technical Training on Robotics, Drones and IoT

February 13 – 17 ,2023

## FEEDBACK FORM

Date: 17.02.2023

Name of the Participant: P. Prasanna

Year/Semester/Section: II / 3<sup>rd</sup> year / B

Mail ID: PrasanramPrasanna@gmail.com

S.No	Question	Excellent	Good	Satisfactory
1	How would you rate the hands-on activities?	✓		
2	Whether your expectation gets satisfied	✓		
3	Whether the session was interactive	✓		
4	Knowledge gained from this technical training is		✓	
5	Did the training enlighten your mind	✓		

What kind of training would you like to include in future?

We want training like this.  
 For training we want to develop skills in both the software and hardware. But we want much more time to learn more.

In particular, what was effective, meaningful and memorable to you?

Robotics, Arduino, Sensors are very well learned.

Any other suggestions



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P. Prasanna  
Signature of the Participant



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#### FEEDBACK FORM

Date: 17.02.2023

Name of the Participant: R.Selvamadhesvaran

Year/Semester/Section: 2nd / II / A

Mail ID:

S.No	Question	Excellent	Good	Satisfactory
1	How would you rate the hands-on activities?	/		
2	Whether your expectation gets satisfied	/		
3	Whether the session was interactive		/	
4	Knowledge gained from this technical training is	/		
5	Did the training enlighten your mind	/		

What kind of training would you like to include in future?

We need more hand activities

In particular, what was effective, meaningful and memorable to you?

Sense, think and act

Any other suggestions

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R. S

Signature of the Participant





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#### FEEDBACK FORM

Date: 17.02.2023

Name of the Participant: C. Kiran chellaponmal

Year/Semester/Section: 2nd / II/I A

Mail ID: Kiranchellapenmal12@gmail.com

S.No	Question	Excellent	Good	Satisfactory
1	How would you rate the hands-on activities?	/		
2	Whether your expectation gets satisfied	/		
3	Whether the session was interactive		/	
4	Knowledge gained from this technical training is	/		
5	Did the training enlighten your mind	/		

What kind of training would you like to include in future?

group discussion and we need more physical activities. And need more time for these kind of training.

In particular, what was effective, meaningful and memorable to you?

Those words

SENSE, THINK, ACT

Any other suggestions

Waiting for the next Session



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February 13 – 17 ,2023

#### FEEDBACK FORM

Date: 17.02.2023

Name of the Participant: K.Gowtham

Year/Semester/Section: II<sup>nd</sup> / AIV / A

Mail ID: gowtham.sachin15@gmail.com

S.No	Question	Excellent	Good	Satisfactory
1	How would you rate the hands-on activities?	/		
2	Whether your expectation gets satisfied	/		
3	Whether the session was interactive		/	
4	Knowledge gained from this technical training is		/	
5	Did the training enlighten your mind	/		

What kind of training would you like to include in future?

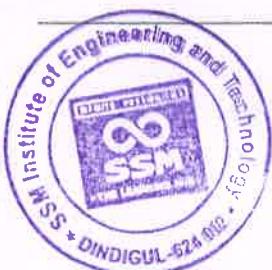
Indepth concept of IOT

In particular, what was effective, meaningful and memorable to you?

obstacle avoiding robot

Any other suggestions

No



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Signature of the Participant



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February 13 – 17 ,2023

#### FEEDBACK FORM

Date: 17.02.2023

Name of the Participant: M. Sri Ram

Year/Semester/Section: II year / IV / C

Mail ID: ram2002.sri@gmail.com

S.No	Question	Excellent	Good	Satisfactory
1	How would you rate the hands-on activities?		/	
2	Whether your expectation gets satisfied	/		
3	Whether the session was interactive		/	
4	Knowledge gained from this technical training is		/	
5	Did the training enlighten your mind	/		

What kind of training would you like to include in future?

in depth concept and training about robotics

In particular, what was effective, meaningful and memorable to you?

Bluetooth control robot

Any other suggestions

100



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#### FEEDBACK FORM

Date: 17.02.2023

Name of the Participant: K. Sooriya

Year/Semester/Section: II / IV / C

Mail ID: Sooriya.kannang23@gmail.com

S.No	Question	Excellent	Good	Satisfactory
1	How would you rate the hands-on activities?		✓	
2	Whether your expectation gets satisfied		✓	
3	Whether the session was interactive	✓		
4	Knowledge gained from this technical training is		✓	
5	Did the training enlighten your mind		✓	

What kind of training would you like to include in future?

More concept about hardware

In particular, what was effective, meaningful and memorable to you?

Line following robot

Any other suggestions

No



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#### Technical Training on Robotics, Drones and IoT

February 13 - 17, 2023

#### FEEDBACK FORM

Date: 17.02.2023

Name of the Participant: S. Farhan Naseem

Year/Semester/Section: II ECE A - IV Sem

Mail ID: syedmohamedjaludeen@gmail.com

S.No	Question	Excellent	Good	Satisfactory
1	How would you rate the hands-on activities?	✓		
2	Whether your expectation gets satisfied		✓	
3	Whether the session was interactive	✓		
4	Knowledge gained from this technical training is		✓	
5	Did the training enlighten your mind		✓	

What kind of training would you like to include in future?

I like to include a training about further information in drones, and IoT training

In particular, what was effective, meaningful and memorable to you?

This session was very useful in future. We experienced good innovative ideas and hands-on-activities.

Any other suggestions

Thanks for guiding us in past 5 days, motivating us.

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Signature of the Participant



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#### FEEDBACK FORM

Date: 17.02.2023

Name of the Participant:

P sugapriya

Year/Semester/Section:

II year - C' section

Mail ID: Sugapriya5409@gmail.com

S.No	Question	Excellent	Good	Satisfactory
1	How would you rate the hands-on activities?	✓		
2	Whether your expectation gets satisfied	✓		
3	Whether the session was interactive	✓		
4	Knowledge gained from this technical training is	✓		
5	Did the training enlighten your mind	✓		

What kind of training would you like to include in future?

I like do include a training about IoT.

In particular, what was effective, meaningful and memorable to you?

In this lesson we experience a Hands on training and learned a things to handle a subjects.

Any other suggestions  
Everything is excellent but I request to add some more components for each batches.



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P.sugapriya  
Signature of the Participant



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#### FEEDBACK FORM

Date: 17.02.2023

Name of the Participant: P. LAKSHMI PRIYA

Year/Semester/Section: II / IV / ECE-A

Mail ID: lp114094@gmail.com

S.No	Question	Excellent	Good	Satisfactory
1	How would you rate the hands-on activities?		✓	
2	Whether your expectation gets satisfied		✓	
3	Whether the session was interactive	✓		
4	Knowledge gained from this technical training is	✓		
5	Did the training enlighten your mind		✓	

What kind of training would you like to include in future?

IOT training and Drone

In particular, what was effective, meaningful and memorable to you?

Drone was effective and memorable.  
and Robotics are meaningful

Any other suggestions

R.D.J



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P. Lakshmi Priya  
Signature of the Participant



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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



## VILLAGE TECHNOLOGY SCHOOL

CELESTIAL JOURNEY  
— OR COMPLETION —

This is to certify that

Mr./Ms..... KISHORE KANNAN H.....  
of .....  
..... Year has Participated in the 5 days Boot Camp on

“ROBOTICS, IOT & DRONES” From 13.02.2023 to 18.02.2023

11

T. S. Balaji

Mr. Balaji Thiru  
**CEO & Founder**  
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..... Year has Participated in the 5 days Boot Camp on

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*Ahu*

*Dhj*

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Dr.D.Senthil Kumar  
Principal

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CELESTIAL ACADEMY  
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This is to certify that

Mr./Ms.....Lokesh K..... of .....

..... Year has Participated in the 5 days Boot Camp on

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T. Lokesh

Mr. Balaji Thiru  
CEO & Founder  
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Dr. S. Thiyagu Lakshmi  
Head of Department - ECE  
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..... Year has Participated in the 5 days Boot Camp on

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Principal  
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Kannithiupatti, Village, Sivagangai (P)  
Tamil Nadu, India - 624 002.

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.....II..... Year has Participated in the 5 days Boot Camp on

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Mr. Balaji Thiru  
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A. S. J.

P.D.Senthil Kumaran

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Kuttathupatti Village, Sivagangudi P.O., SSMIET  
District: Dindigul, State: Tamil Nadu, Pin: 624 002



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— OF COMPLETION —

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CEO & Founder  
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Dr. S. Kalai Vinayagam  
Head of Department - ECE  
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Dr. D. Selvi Meenakshi  
Principal  
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