

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(Unit of Alva's Education Foundation (R), Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi &

Approved by AICTE, New Delhi. Recognized by Government of Karnataka.

Accredited by NAAC with A+ & NBA accreditation for ECE & CSE

DEPARTMENT OF ECE TECHNICAL TALK REPORT

JUNE-2023

TECHNICAL TALK REPORT



ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(Unit of Alva's Education Foundation (R), Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE,
New Delhi. Recognized by Government of Karnataka,

A+, Accredited by NAAC & NBA (ECE & CSE)

Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka

Ph: 08258-262725; Mob: 722262724, 7026262725, mail: principalaiet08@gmail.com

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Report of Technical Talk-III

Topic: "Artificial Intelligence in Remote sensing"

Resource Person: Dr. Shyam Lal, Assistant Professor, NITK Surathkal, D.K.

Date: 10-06-2023

Time: 11:00AM to 12:45 PM.

The poster is for a technical talk titled "Artificial Intelligence in Remote Sensing". It features the ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY logo at the top left, which includes the text "Accredited by NAAC with A+ Grade & NBA (CSE & ECE)" and "Shobhavana Campus, Mijar, Moodbidri, Karnataka-574225". Below the logo, it says "ELECTRONICS AND COMMUNICATION ENGINEERING". The main title "TECHNICAL TALK 2022-23 (Even)" is in a central box. At the bottom left is a portrait of Dr. Shyam Lal with the text "ECE" below it. To the right of the portrait, it says "10th June 2023 @ 11:00AM", "'Artificial Intelligence in Remote Sensing'", "VENUE: MBA SEMINAR HALL", and "By Dr. Shyam Lal, Assistant Professor, NITK Surathkal".

Department of ECE, conducted the third technical talk of the even semester 2022-23 on "Artificial Intelligence in Remote sensing" for the staff and students of 4th and 6th semester - ECE on 10th June 2023.

Resource person for the talk was Dr. Shyam Lal, Assistant Professor, NITK Surathkal, Presently he is working as Assistant Professor (7th CPC) in the Department of Electronics & Communication Engineering, National Institute of Technology Karnataka,



ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(Unit of Alva's Education Foundation (R), Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE,
New Delhi. Recognized by Government of Karnataka.

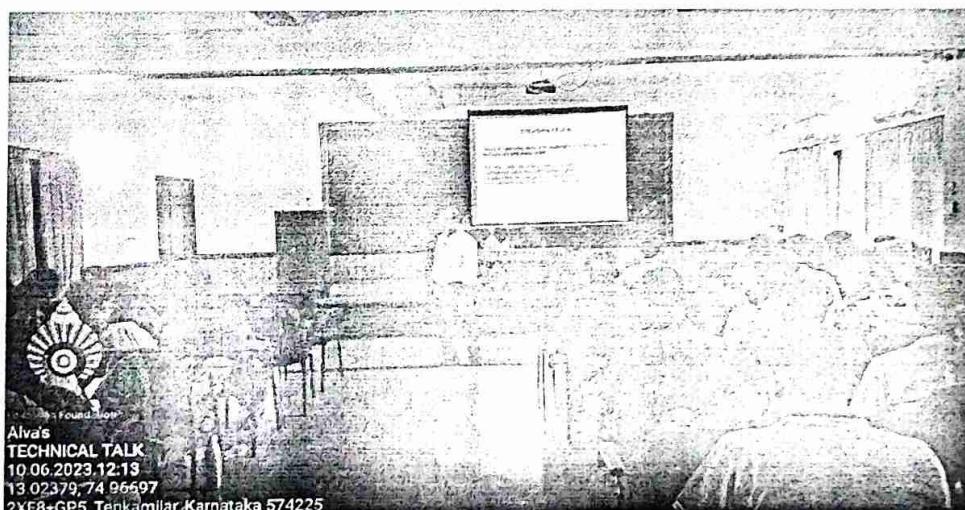
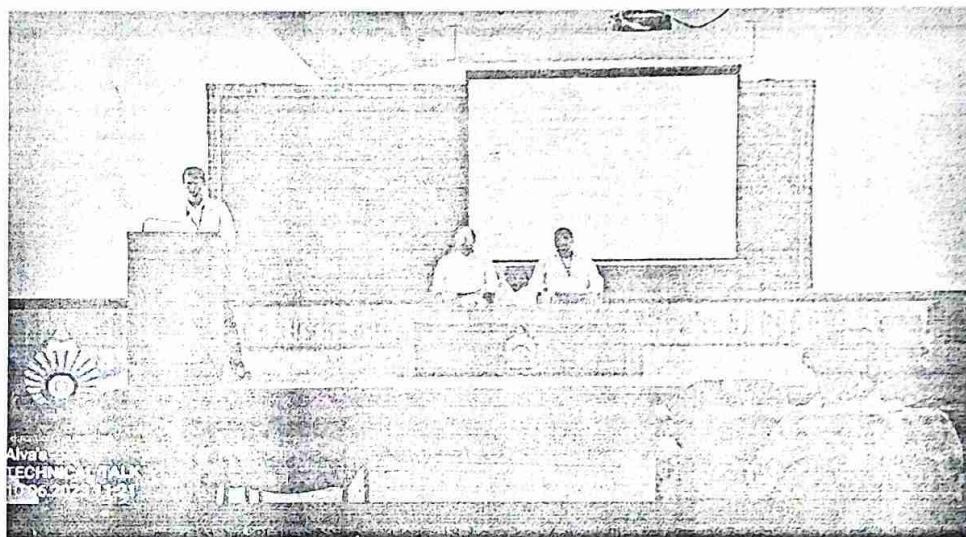
A+, Accredited by NAAC& NBA(ECE & CSE)

Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka

Ph: 08258-262725; Mob:722262724,7026262725,mail:principalaiet08@gmail.com

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

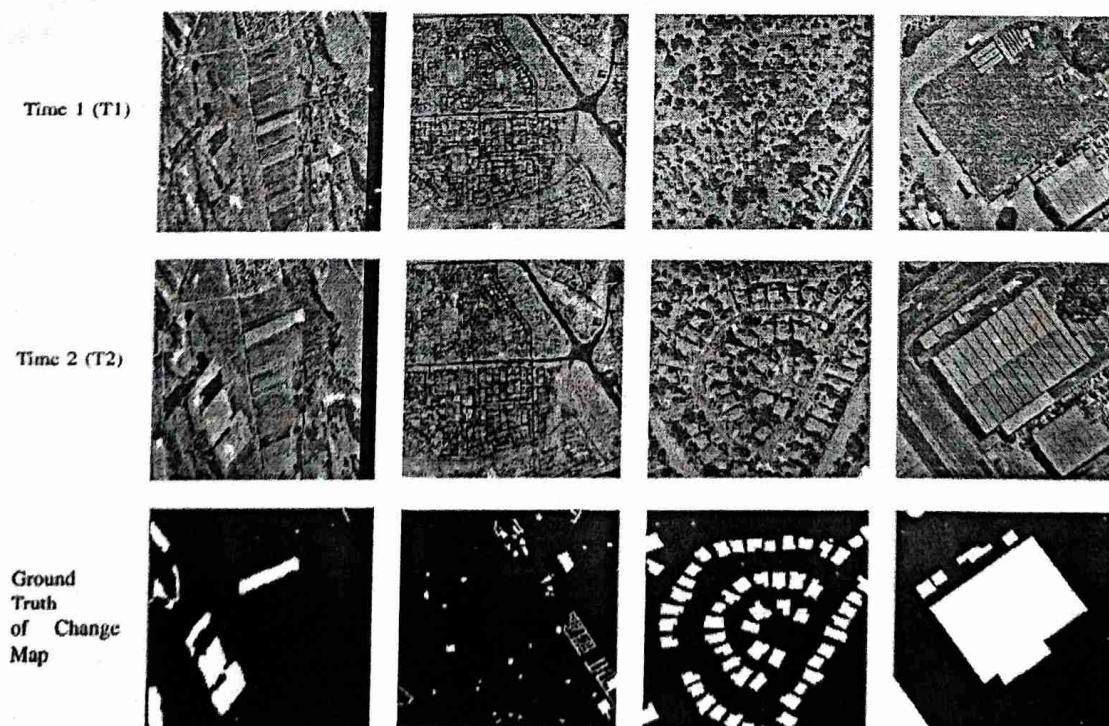
Surathkal, Mangalore. He has teaching experience more than 20 years and visited as visiting Professor at the Department of Electrical, Computer and Biomedical Engineering of the University of Pavia, Italy. He also Visited in the Department of Information and Communication Engineering, School of Engineering at the Tokyo Institute of Technology, Tokyo, Japan. He supervised more than 74 projects supervised in the area of Signal Processing, Machine Learning and other field of Electronics and Communication Engineering.



Talk was started with welcoming of Resource person by Prof. Sudhakara H M Associate Professor, Department of ECE. Talk on Artificial Intelligence in Remote sensing was

presented with Introduction, Neural Networks (NNs), Deep Learning Architectures, Applications of Deep Learning Architectures, Open Source Remote Sensing, Datasets for Deep Learning models, Annotation Tools for Remote Sensing Images and Remote Sensing. He explained all types of Remote Sensing: • Atmosphere Remote Sensing • Urban Remote Sensing • Forest Remote Sensing • Ocean Remote Sensing • Environmental Remote Sensing • Ecological Remote Sensing • Remote Sensing In Agriculture and Vegetation • Remote Sensing in Geology, Geomorphology and Hydrology.

In the talk concepts of deep learning and computer vision were described and he expressed that Computer vision is a field of study which focused on the problem of helping computers to see and understand. The main objective of computer vision is to extract useful information from images. He described major applications of Deep learning such as Signal Processing, Speaker recognition, Music and Speech separation, Image Processing- Image Classification, Pattern and Facial recognition, Healthcare-Medical diagnosis and cancer research, Wireless Communication- 5G Networks and Beyond, Self driving vehicle trajectory prediction Robotics, Remote Sensing- Agriculture, Urbanization (LULC), Disaster Management, Ecology & Forestry, Data Mining, Cyber Security and IOT Applications.



He highlighted that in recent years, there is growth in the field of commodity systems for

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(Unit of Alva's Education Foundation (R), Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE,
New Delhi. Recognized by Government of Karnataka.

A+, Accredited by NAAC & NBA (ECE & CSE)

Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka

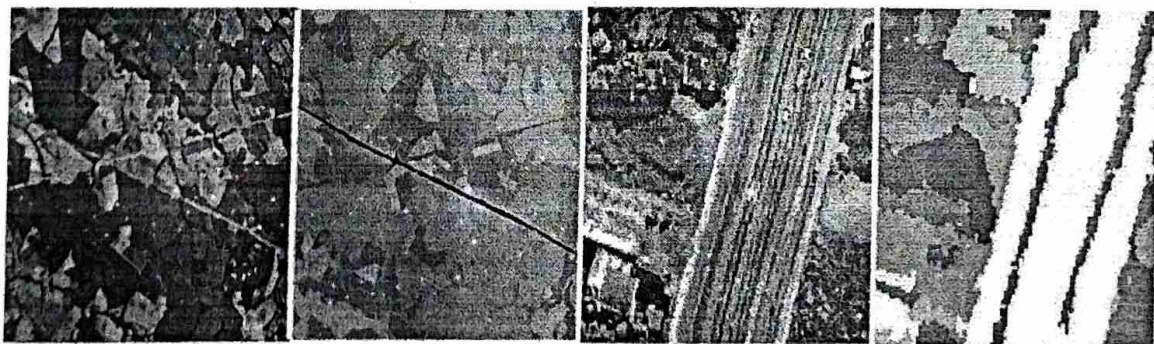
Ph: 08258-262725; Mob: 722262724, 7026262725, mail: principalaiet08@gmail.com



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

optical character recognition and face detection in cameras and smartphones. He discussed about Semantic Segmentation which is the task of assigning a class to every pixel in a given image. He differentiated Supervised learning and Unsupervised learning with examples. He explained real time example: Automated driving system as Reinforcement learning.

Many applications of deep learning in Remote Sensing were highlighted in the session. They include Medical Image segmentation, Medical Diagnosis(Cancer Detection- Breast, Liver, Colon, Kidney, Gastric and etc.), Diabetic Detection from Retinal Images, Credit Card Fraudulent Transaction detection, Email Spam Detection, Steel Defect Detection, Medical Insurance Fraud, Road Extraction, Building Extraction, River Network extraction, Railway network extraction, Cloud Segmentation, Change Detection and Landslide Detection. He gave illustrative Examples for Object Segmentation on Massachusetts Building Dataset, Cloud Detection from satellite Images, Change Detection from Remote Sensing Images, Landslide Detection from satellite Images, Multiple object extraction from Remote Sensing Images, Object Segmentation on Multispectral satellite Images and many more.



(a)

(b)

(c)

(d)

■ Culture

■ Grasslands

■ Bushes

■ Reforestation

■ Dams

■ Road

■ Covering of trees

■ Shadows

■ Grass lands

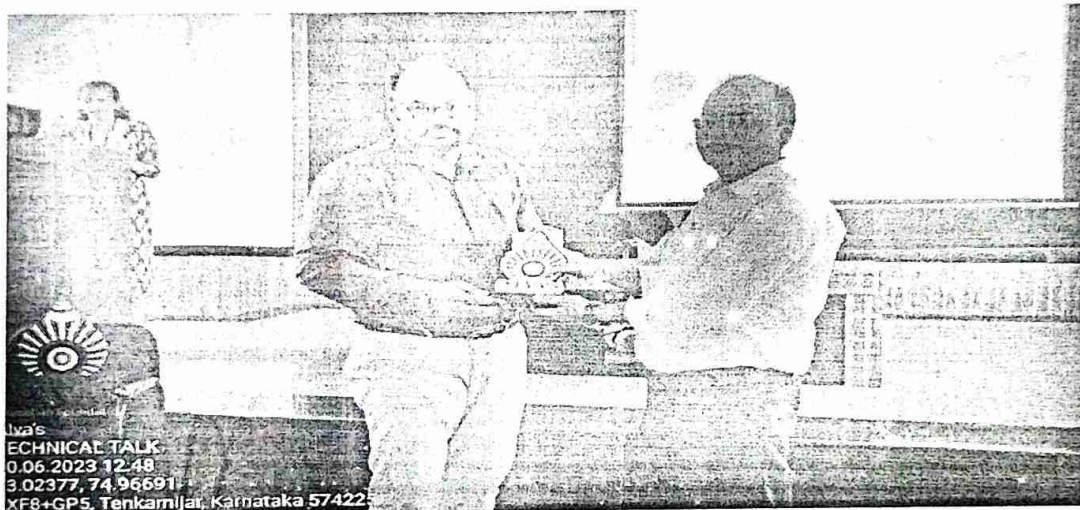
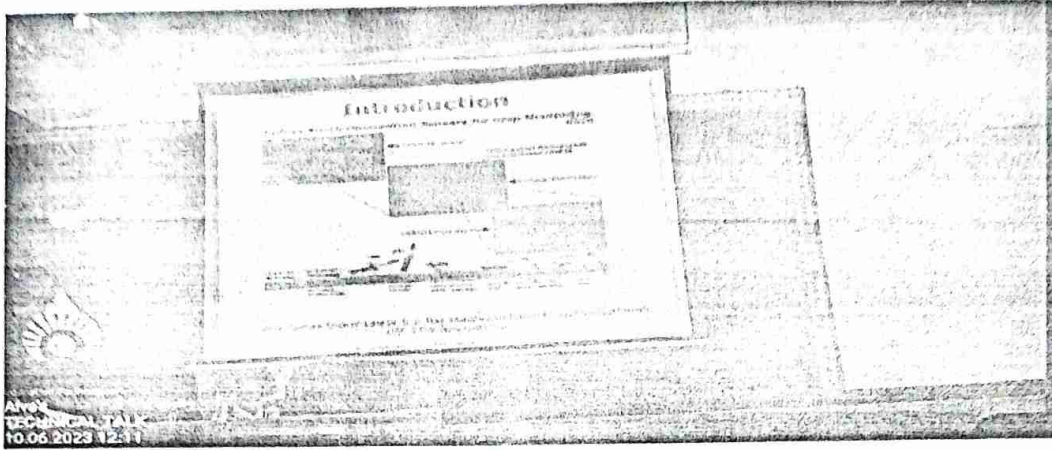
■ Covering of dark tonality

■ Roads

■ Bare soil moist

■ Bare soil clear

■ Covering of clear tonality



Finally Prof. Sameera Assistant Professor, department of ECE gave memento to the resource person and expressed gratitude for giving such an informative talk to the students.

16/1
Technical Talk
Coordination

Siddesh
HOD
H. O. D.

Dept. Of Electronics & Communication
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225

[Signature]
Principal
PRINCIPAL
Alva's Institute of Engg. & Technol
Mijar, MOODBIDRI - 574 225, D



ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(Unit of Alva's Education Foundation (R), Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi. Recognized by Government of Karnataka.

A+, Accredited by NACC & NBA (ECE & CSE)

Shobhavana Campus, MLJAR-574225, Moodbidri, D.K., Karnataka

Ph: 08258-262725; Mob: 722262724, 7026262725, mail: principal@iet08@gmail.com

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Date: 10-06-2023

4th Semester A – Section

Technical talk Attendance

“Artificial Intelligence in Remote Sensing”

by Dr. Shyam Lal

Sl No	USN	Student Name	Signature
1	4AL21EC001	A. S. Pavithra	
2	4AL21EC002	Abhishek S	
3	4AL21EC003	Akash A H	
4	4AL21EC005	Akshay Kumar H	
5	4AL21EC006	Amaresha M	
6	4AL21EC007	Anchita	
7	4AL21EC008	Anush S Amargol	
8	4AL21EC009	B.Vennela	
9	4AL21EC010	Basangouda Patil	
10	4AL21EC011	Basavakiran	
11	4AL21EC013	Bharath N	
12	4AL21EC014	Bhaskar T	
13	4AL21EC015	Bhavana.B	
14	4AL21EC016	Chakravarthy Jaipal Teredal	
15	4AL21EC018	Charan Raj R V	
16	4AL21EC019	Chethan M	
17	4AL21EC020	Chethan K.M	
18	4AL21EC021	Chiranjeevi U B	
19	4AL21EC022	Chithra L	
20	4AL21EC023	Darshan T S	
21	4AL21EC024	Darshana Basavaraj Bandi.	
22	4AL21EC025	Deeksha S	
23	4AL21EC026	Deekshith D Shetty	
24	4AL21EC027	Diya	
25	4AL21EC028	Gagan H S	
26	4AL21EC029	Gowtham M A	
27	4AL21EC030	Harshitha B S	
28	4AL21EC031	Hemanth R	
29	4AL21EC032	Hemashri H N	
30	4AL21EC033	Huriya Sanadi	
31	4AL21EC034	Inchara S Shetty	
32	4AL21EC035	Jeevan K G	



ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(Unit of Alva's Education Foundation (R), Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi. Recognized by Government of Karnataka.

A+, Accredited by NACC & NBA (ECE & CSE)

Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka

Ph: 08258-262725; Mob: 722262724, 7026262725, mail: principalaiet08@gmail.com

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

33	4AL21EC036	Jeevan V	<i>Jeevan V</i>
34	4AL21EC037	Kalmesh G Galigoudra	<i>Kalmesh G</i>
35	4AL21EC038	Kaluva Chandrashekar	<i>Chandrashekar</i>
36	4AL21EC039	Keerthan S	
37	4AL21EC040	Kiran Kashyap M	<i>Kiran Kashyap M</i>
38	4AL21EC041	Kishor U	<i>Kishor U</i>
39	4AL21EC042	Lakshan	<i>Lakshan</i>
40	4AL21EC043	Lakshmi Keerthana B	<i>Lakshmi Keerthana B</i>
41	4AL21EC044	Lekhan T	<i>Lekhan T</i>
42	4AL21EC045	Madugonde Sandeep	
43	4AL21EC046	Mahantesh Shidaray Tanvashi	<i>Mahantesh Shidaray Tanvashi</i>
44	4AL21EC047	Mailaragouda N P	<i>Mailaragouda N P</i>
45	4AL21EC049	Manupriya Y	<i>Manupriya Y</i>
46	4AL21EC050	Meghana L	<i>Meghana L</i>
47	4AL21EC051	Mohammed Iqbal	
48	4AL21EC052	Muhammad Razi	
49	4AL21EC053	Nagabhushan H K	<i>Nagabhushan H K</i>
50	4AL21EC054	Naveen Kumar H S	<i>Naveen Kumar H S</i>
51	4AL21EC062	Prajwal S Das	<i>Prajwal S Das</i>
52	4AL21EC068	Ramya R	
53	4AL21EC104	Vaishnavi S	
54	4AL22EC400	Abhishek P T	<i>Abhishek P T</i>
55	4AL22EC401	Chethana A B	<i>Chethana A B</i>
56	4AL22EC402	Chetan G Kur Gouda	<i>Chetan G Kur Gouda</i>
57	4AL22EC403	Lakshmi P B	<i>Lakshmi P B</i>
58	4AL22EC405	Pallavi B	<i>Pallavi B</i>
59	4AL22EC406	Shamshuddin	<i>Shamshuddin</i>
60	4AL22EC407	Suhani R J	<i>Suhani R J</i>
61	4AL22EC408	Veeresh S V	<i>Veeresh S V</i>

Siddesh
HOD

H. O. D.
Dept. Of Electronics & Communication
Alva's Institute of Engg. & Tech.
Mijar, MOODBIDRI - 574



ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(Unit of Alva's Education Foundation (R), Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi. Recognized by Government of Karnataka.

A+, Accredited by NACC & NBA (ECE & CSE)

Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka

Ph: 08258-262725; Mob: 722262724, 7026262725, mail: principalaiet08@gmail.com

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

4th Semester B – Section

Date: 10-06-2023

Technical talk Attendance

"Artificial Intelligence in Remote Sensing"

by **Dr. Shām Lal**

#	USN	Student Name	
1	4AL21EC056	Nivedita T Patil	<i>N.T. Patil</i>
2	4AL21EC057	Prajyot Rajgonda Patil	
3	4AL21EC058	Pavan	<i>Pavan</i>
4	4AL21EC059	Pooja Venkatesh Naik	<i>Pooja Naik</i>
5	4AL21EC060	Prajwal L R	<i>Prajwal L R</i>
6	4AL21EC061	Prajwal Malabagi	<i>Prajwal Malabagi</i>
7	4AL21EC063	Prakruthi K P	<i>Prakruthi K P</i>
8	4AL21EC064	Prasanna Kumar B I	<i>Prasanna Kumar B I</i>
9	4AL21EC065	Rakesh	<i>Rakesh</i>
10	4AL21EC066	Raksha	<i>Raksha</i>
11	4AL21EC067	Rakshith	<i>Rakshith</i>
12	4AL21EC069	Ravi Kovi	<i>Ravi Kovi</i>
13	4AL21EC070	Sahana	<i>Sahana</i>
14	4AL21EC071	Saikumar	<i>Saikumar</i>
15	4AL21EC073	Sanjana Shrikant Havanoor	<i>Sanjana</i>
16	4AL21EC074	Santhosha S	<i>Santhosha S</i>
17	4AL21EC076	Shashank C Soppannavar	<i>Shashank C Soppannavar</i>
18	4AL21EC077	Shashank Swami	<i>Shashank Swami</i>
19	4AL21EC078	Shashank Viresh Shetti	<i>Shashank Viresh Shetti</i>
20	4AL21EC079	Shivakumar K V	<i>Shivakumar K V</i>
21	4AL21EC080	Shravya Shetty	<i>Shravya Shetty</i>
22	4AL21EC081	Shreya Chandrasa Shetty	
23	4AL21EC082	Shreya K R	<i>Shreya K R</i>
24	4AL21EC083	Shreyas S Naik	<i>Shreyas S Naik</i>
25	4AL21EC084	Shruthi	<i>Shruthi</i>



ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(Unit of Alva's Education Foundation (R), Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi. Recognized by Government of Karnataka.

A+, Accredited by NACC & NBA (ECE & CSE)

Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka

Ph: 08258-262725; Mob: 722262724, 7026262725, mail: principal@alvaet@gmail.com

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

26	4AL21EC085	Siddharoodh B Durgipujeri	
27	4AL21EC086	Sinchana C K	Sinchana. C.K.
28	4AL21EC087	Sinchana R	
29	4AL21EC088	Sinchana RD	Sinchana RD
30	4AL21EC089	Sinchana.S.D	Sinchana.S.D
31	4AL21EC090	Sindhu KS	Sindhuk S
32	4AL21EC091	Sindhu S Patil	Sindhu S Patil
33	4AL21EC092	Sonali	
34	4AL21EC093	Srishti S Shetty	
35	4AL21EC094	Suma K G	Suma K G
36	4AL21EC095	Sumith N	
37	4AL21EC096	Sushrutha N	Sushrutha
38	4AL21EC097	Tanishka	
39	4AL21EC098	Tej Ashok	
40	4AL21EC099	Thejas J Kotian	
41	4AL21EC100	Thejashwi P Acharya	
42	4AL21EC101	Thrisha P Hegde	
43	4AL21EC102	Usha Rani.N	Usha Rani N
44	4AL21EC103	V Venkta Sainihith Mullapudi	V Venkta
45	4AL21EC105	Vaishnavi Vithal Naik	Vaishnavi
46	4AL21EC106	Varshini Shetty	
47	4AL21EC107	Varun Kumar R	Varun
48	4AL21EC108	Varun Devaramani	Varun
49	4AL21EC109	Veena Basavaraj Rachappanavar	Veena
50	4AL21EC110	Videesh D Shetty	
51	4AL21EC111	Vishal	
52	4AL21EC112	Vishwanath HB	
53	4AL21EC113	Yashaswini T R	
54	4AL21EC114	Yashwanth GT	
55	4AL21EC115	Yogeshwar M	
56	4AL20EC009	C. Navajeevan	

57 4AL22EC404 Navaneeth



ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(Unit of Alva's Education Foundation (R), Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi. Recognized by Government of Karnataka.

Accredited by NAAC with A+ Grade

Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka

6th ECE

Department of Electronics and Communication Engineering

Technical Talk

Date: 10/06/2023

#	USN	Student Name	Student Contact Number
1	4AL20EC001	Aishwarya A P	
2	4AL20EC002	Aishwarya Panchagavi	
3	4AL20EC004	Akshay	
4	4AL20EC005	Akshay Sonar	
5	4AL20EC006	Aravinda Jogi	
6	4AL20EC007	Bhavana M	
7	4AL20EC008	Chaithrashree M G	
8	4AL20EC010	Chethana.M	
9	4AL20EC011	Darshan Madival	
10	4AL20EC012	Disha H	
11	4AL20EC013	Harshitha D K	
12	4AL20EC014	Jyoti Phakkirannanavar	
13	4AL20EC015	K. Vijay Bhanu	
14	4AL20EC016	Karthik G Shet	
15	4AL20EC017	Kishan Kumar	
16	4AL20EC018	Krathika	
17	4AL20EC019	Kshama Tc	
18	4AL20EC020	Libina Lal	
19	4AL20EC021	Manjunath Sajjan	
20	4AL20EC023	Mohammed Sharfuddin	
21	4AL20EC024	Mokshith	
22	4AL20EC025	Monika. D. B.	
23	4AL20EC026	Monisha P	
24	4AL20EC027	Nagarjuna GS	
25	4AL20EC028	Padala Sattibabu	
26	4AL20EC029	P V Likhitha	
27	4AL20EC030	Pavan Kh	
28	4AL20EC031	Pooja P	
29	4AL20EC032	Prajaktha Poojary	



ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(Unit of Alva's Education Foundation (R), Moodbidri)
Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi. Recognized by
Government of Karnataka.
Accredited by NAAC with A+ Grade
Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka

Department of Electronics and Communication Engineering

Technical Talk

Date: 10/06/2023

30	4AL20EC033	Prajwal R	
31	4AL20EC034	Prashanth VK	
32	4AL20EC035	Pratham Puthran	
33	4AL20EC036	Prathish G Nayak	
34	4AL20EC037	Praveen Vishwakarma	
35	4AL20EC038	Preeti G M	
36	4AL20EC039	Rakesh Sangshetty	
37	4AL20EC040	Rakshitha S	
38	4AL20EC041	Ramya K	
39	4AL20EC042	Ranjitha R	
40	4AL20EC043	Rohan H	
41	4AL20EC045	Sangamesh Biradar	
42	4AL20EC046	Sanjay Gk	
43	4AL20EC048	Santhriпти C S	
44	4AL20EC049	Shravan V Upadhyaya	
45	4AL20EC050	Shridevi Rao	
46	4AL20EC051	Shruthi	
47	4AL20EC052	Shubhashri S	
48	4AL20EC053	Shwetha	
49	4AL20EC054	Soumya N	
50	4AL20EC055	spoorthi salaskar	
51	4AL20EC056	Srujan	
52	4AL20EC057	Umesh	
53	4AL20EC058	Varshini K L	
54	4AL20EC059	Veena Talawar	
55	4AL20EC060	Vinod Raj G N	
56	4AL20EC061	Vinyashree Jain	
57	4AL20EC062	Vishanth	
58	4AL20EC063	Vishwanath	

Siddesh

H.O.D.

Dept. Of Electronics & Communication
Alva's Institute of Engineering & Technology
MIJAR-574225, Moodbidri, D.K., Karnataka

HOD



ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(Unit of Alva's Education Foundation (R), Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi.

Recognized by Government of Karnataka.

A+, Accredited by NAAC& NBA (ECE & CSE)

Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka

Ph: 08258-262725; Mob:722262724,7026262725,mail:principalaiet08@gmail.com

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Date: 14.06.2023

1. Name of the event : Technical Talk
2. Resource persons : Dr. Shyam Lal,
3. Date of talk : 10-06-2023
4. Dept. organizing the event : ECE
5. Coordinator : Mr. Sudhakara H M

Detailed budget of the event:

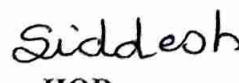
Sl. No.	Particulars	Party	Cash/ A/c	Amount (Rs.)
1.	Honorarium	Dr. Shyam Lal,	Cash	2500=00
2.	Transportation (To and from NITK, Suratkal)	Dr. Shyam Lal,	Cash	1000=00
3.	Miscellaneous	Bouquet and Refreshment	Cash	170=00
			Total	3670=00


Advance received: Rs.3500=00

Balance : 170=00


Technical Talk Coordinator
(SUDHAKARA H M)

Finance Officer


Siddesh
H.B. D.
Dept. Of Electronics & Communication
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225


Principal
PRINCIPAL
Alva's Institute of Engg. & Technology,
Mijar, MOODBIDRI - 574 225, D.K.



ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

(A Unit of Alva's Education Foundation)
Shobhavana Campus, Mijar, Moodbidri- 574 225, D.K.

DEBIT / CREDIT VOUCHER

00023

Date 10/6/2023

DEPARTMENT

EC E

SL NO

EXPENSE HEAD

DESCRIPTION

AMOUNT

1

Remuneration

Technical talk

2500/-

TA to 3 for NITK

Technical talk.

1000

TOTAL

3500/-

Rupees:

Three thousand five hundred only

Siddesh

PREPARED BY

PRINCIPAL

AO

HOD

H. O. D.
Dept. Of Electronics & Communication
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225