MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA

Deemed to be University

(Declared under Distinct Category by Ministry of Education, Government of India)

NAAC ACCREDITED WITH A++ GRADE

DEPARTMENT OF ELECTRONICS ENGINEERING

Expert Talk on "AI and ML with Edge Device"

Date: September 13, 2025

Time: 11:00 A.M. to 1:00 P.M.

Mode: Online (Google Meet)

Coordinators Name   **Head of the Department**

Dr. Hemant Choubey   **Dr. Laxmi Shrivastava**

Prof. Vandana T. Bhatt

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA

Deemed to be University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE
DEPARTMENT OF ELECTRONICS ENGINEERING

Resource Person: Mr. Amit Singh, R&D Engineer, Scientech Technologies Pvt Ltd. (Expert in Artificial Intelligence and Machine Learning, Edge Computing Specialist)

Objective of the Event: To provide insights into Artificial Intelligence and Machine Learning applications with edge devices, focusing on real-world applications, deployment challenges, and industry trends.

Salient Points of the Expert Talk

1. **Introduction to Edge AI and Tiny ML:** Understanding the shift from cloud-based AI to on-device intelligence.
2. **Challenges & Opportunities:** Discussing the constraints of edge devices (power, computation, memory) and the innovative solutions they enable.
3. **Real-World Application:** A detailed case study on the predictive maintenance of electric motors using TinyML, presented by the expert.
4. **Technology Stack:** Overview of the tools, languages (Python), and frameworks used for developing and deploying models on edge devices.
5. **Career Pathways:** Insights into the skills required and future prospects in the field of Edge AI and ML.

OUTCOME

The expert talk significantly enhanced the participants' knowledge of AI and ML concepts, with a strong emphasis on the role of edge devices in modern applications. Students gained practical insights into real-world implementations, encouraging them to explore career and research opportunities in Edge AI. The session provided valuable guidance on the skills needed for careers in this emerging technological domain

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA
Deemed to be University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE
DEPARTMENT OF ELECTRONICS ENGINEERING

REPORT

The purpose of this report is to summarize the expert talk on "AI and ML with Edge Device" delivered by Mr. Amit Singh on September 13, 2025.

Expert Talk Report: AI and ML with Edge Device

Date: 13th September 2025

The key highlights of the session were:

1. An engaging introduction to the concept of Edge Computing and its synergy with AI.
2. A deep dive into the practical challenges of deploying ML models on microcontrollers and low-power devices.
3. A comprehensive walkthrough of a live project on predictive maintenance, highlighting data collection, feature engineering, model optimization, and deployment.
4. Emphasis on the importance of Python programming and efficient coding practices for edge environments.
5. An interactive Q&A session where students clarified doubts about technology, implementation, and career opportunities.
6. The session was highly informative, bridging the gap between theoretical AI concepts and their practical, efficient application in the real world.

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA
Deemed to be University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE
DEPARTMENT OF ELECTRONICS ENGINEERING

ATTENDANCE

Timestamp	Email Address	Name of the student	Enrolment No.	Name of the Department	Semester	Mobile no.
9/13/2025 11:52:10	23ec10kr67@mitsgwl.ac.in	krishna vishwakarma	0901EC2310 66	electronics	5th	93298669 96
9/13/2025 11:52:15	23ec10ma76@mitsgwl.ac.in	Manoj Meena	0901EC2310 75	Electronics	5th	79991783 92
9/13/2025 11:52:16	23ec10ku70@mitsgwl.ac.in	Kushagra Singh	0901EC2310 69	Electronics	5th	84618304 45
9/13/2025 11:52:22	24ec10pr4@mitsgwl.ac.in	Priyanshi Sharma	BTEL24O11 57	Electronics engineering ec	3rd	70490456 64
9/13/2025 11:52:26	23ec10di42@mitsgwl.ac.in	Dinesh Namdev	0901EC2310 42	Electronics	5th	91118679 05
9/13/2025 11:52:27	23ce10cha57@mitsgwl.ac.in	Harshit dwivedi	0901CE2310 43	Civil	5th	74407237 68
9/13/2025 11:52:27	23ce10ha39@mitsgwl.ac.in	Harsh Umraiya	0901CE2310 40	Civil	5th	93722224 16
9/13/2025 11:52:38	23ce10ri64@mitsgwl.ac.in	Ritesh Soni	0901CE2310 76	Civil engineering	5th	99269809 04
9/13/2025 11:52:42	23ec10vi153@mitsgwl.ac.in	Vishal Verma	0901EC2311 53	Electronics	5th	83199050 31
9/13/2025 11:52:42	23ec10ro108@mitsgwl.ac.in	ROHIT RAWAT	0901EC2311 07	Electronics engineering	3rd	90987793 24
9/13/2025 11:52:43	23ec10es45@mitsgwl.ac.in	Eshan Ashwani Gupta	0901Ec23104 5	Electronic	5th	90097419 30
9/13/2025 11:52:44	23ec10ad6@mitsgwl.ac.in	Adil Qureshi	0901EC2310 06	Electronics and communication	5th	62608999 28
9/13/2025 11:52:52	23ec10pi86@mitsgwl.ac.in	Piyush Raghuwanshi	0901EC2310 85	Electronic engineering	5th	83054111 64
9/13/2025	23ec10hr57@mitsgwl.ac.in	Hrishabh simaiya	0901ec23105 5	electronics engineering	5th	62608521 12

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA

Deemed to be University

(Declared under Distinct Category by Ministry of Education, Government of India)

NAAC ACCREDITED WITH A++ GRADE

DEPARTMENT OF ELECTRONICS ENGINEERING

9/13/2025 11:53:02						
9/13/2025 11:53:04	prasadvivek004@gmail.com	Vivek Prasad	0901EC231154	Electronics engineering	5th	9522880999
9/13/2025 11:53:05	25am1aa2@mitsgwl.ac.in	Aadrika Gupta	BTAM25O1002	AIML	1st	9098042195
9/13/2025 11:53:06	23ce10ma52@mitsgwl.ac.in	Mayank Parashar	0901CE231060	Civil Engineering Department	5th	7415790772
9/13/2025 11:53:07	23ce10la48@mitsgwl.ac.in	Lakshika soni	0901CE231055	Civil engineering	5th	9893129765
9/13/2025 11:53:08	23ec10hr56@mitsgwl.ac.in	Hridyansh Bansal	0901EC231054	EC	5th	7470385615
9/13/2025 11:53:12	rathorankesh487@gmail.com	Ankesh Rathor	BTEL24O1022	Electronics engineering	3rd	9302450230
9/13/2025 11:53:16	24ce10ch20@mitsgwl.ac.in	Chitransh singhal	BTCE24O1023	Civil engineering	3rd	9358734135
9/13/2025 11:53:17	24ec10ak16@mitsgwl.ac.in	Akshat Bhatnagar	BTEL24O1017	Electronics	3rd	8989561803
9/13/2025 11:53:23	23ce10pr58@mitsgwl.ac.in	PRANSHU SHARMA	0901CE231067	Civil Engineering	5th	8602979363
9/13/2025 11:53:24	23ec10kh64@mitsgwl.ac.in	Khushi Mittal	0901EC231063	Electronics Engineering	5th	9244593743
9/13/2025 11:53:24	23ec10an13@mitsgwl.ac.in	Ankit Sharma	0901EC231013	Electronics engineering	5th	9399621083
9/13/2025 11:53:26	25am1an14@mitsgwl.ac.in	Anupriya Soni	BTAM25O1014	AIML	1st	9294547001
9/13/2025 11:53:35	23ec10ku68@mitsgwl.ac.in	Kuldeep Singh	0901EC231067	Electronics engineering	5th	7440624831
9/13/2025 11:53:39	23ec10an21@mitsgwl.ac.in	Anushka Vishwakarma	0901EC231021	Electronics Engineering	5th	8450832258
9/13/2025 11:53:39	25ai1so140@mitsgwl.ac.in	Somya Patidar	BTAI25O1140	AI	1st	9826772701

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA

Deemed to be University

(Declared under Distinct Category by Ministry of Education, Government of India)

NAAC ACCREDITED WITH A++ GRADE

DEPARTMENT OF ELECTRONICS ENGINEERING

9/13/2025 11:53:40	23ec10ab1@mitsgwl.ac.in	Abhay Bhadoriya	0901EC231001	Electronics	5th	7389563979
9/13/2025 11:53:40	23ec10ud146@mitsgwl.ac.in	Uday raj Vishwakarma	0901EC231144	Electronics	5th	7987665898
9/13/2025 11:53:41	23ec10ma77@mitsgwl.ac.in	Mansi Dwiwedi	0901EC231076	Electronics	5th	8717820050
9/13/2025 11:53:43	24ce10aa1@mitsgwl.ac.in	AARYAN SINGH	BTCE24O1001	CIVIL	3rd	8982351092
9/13/2025 11:53:48	23ec10so130@mitsgwl.ac.in	Sourabh panwar	0901EC231129	EC	5th	7489134913
9/13/2025 11:53:55	23io10lo31@mitsgwl.ac.in	Lokendra Pratap Singh	0901IO231031	ELECTRONICS ENGG	5th	9691955809
9/13/2025 11:53:57	25ai1sh131@mitsgwl.ac.in	SHIVANSH SAHU	BTAI25O1131	AI	1st	7898652890
9/13/2025 11:54:00	23ec10lo72@mitsgwl.ac.in	LOKESH SINGH SOMWANSI	0901EC231071	Electronics	5th	9893265905
9/13/2025 11:54:04	23ec10ta140@mitsgwl.ac.in	TARUN GUPTA	0901EC231138	EC	5th	6267330645
9/13/2025 11:54:05	23ec10an14@mitsgwl.ac.in	Ankit Singh Kushwah	0901EC231014	Electronic (EC)	5th	8770324106
9/13/2025 11:54:08	23ce10ja44@mitsgwl.ac.in	Jatin kirar	0901CE231049	Civil engineering	5th	8319664059
9/13/2025 11:54:19	24ad10su68@mitsgwl.ac.in	Suhani jain	BTAD24O1068	Artificial intelligence	3rd	8319826633
9/13/2025 11:54:43	23ce10cno48@mitsgwl.ac.in	Noopur Dhakad	0901CE231065	Civil	5th	9893503659
9/13/2025 11:55:15	patelayush25ap@gmail.com	Ayush Patel	0901EC231029	Electronic	5th	7974431339
9/13/2025 11:55:48	25it1di47@mitsgwl.ac.in	Dipanshu Hindoniya	BTIT25O1047	IT	1st	6261787688

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA
Deemed to be University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE
DEPARTMENT OF ELECTRONICS ENGINEERING

9/13/2025 11:56:18	23ec10va150@mitsgwl.ac.in	Vaidant Shrivastava	0901EC231148	EC	5th	7089857664
9/13/2025 11:57:12	24ad10va71@mitsgwl.ac.in	varun visoriya	BTAD24O1071	AI AND DS	3rd	9302200548
9/13/2025 12:00:27	23ec10sh123@mitsgwl.ac.in	Shreeansh Dubey	0901EC231122	Electronics Engineering	5th	7987443652
9/13/2025 12:01:52	23ec10an12@mitsgwl.ac.in	Angel Agrawal	0901EC231012	Electronics engineering	5th	8305786722
9/13/2025 12:03:06	23ec10dh40@mitsgwl.ac.in	Dheeraj mudgal	0901EC231040	Electronic engineering	5th	8989885861
9/13/2025 12:16:08	23ec10di44@mitsgwl.ac.in	DIVYANSH SAMADHIYA	0901EC231044	Electronics	5th	7747838383
9/13/2025 12:20:01	23ec10ha52@mitsgwl.ac.in	Harsh Rajpal	0901EC231050	Electronics engineering	5th	9376190304
9/13/2025 12:23:34	23ec10la71@mitsgwl.ac.in	Lakshya shinde	0901EC231070	Electronics engineering	5th	8871503201
9/13/2025 12:30:24	23ec10dh41@mitsgwl.ac.in	Dhruv soni	0901EC231041	Electronics	5th	8989814813
9/13/2025 12:38:40	24ec3dkr1@mitsgwl.ac.in	KRISHNA DUBEY	0901EC243D01	ELECTRONICS AND COMMUNICATION (EC)	5th	9301319613
9/13/2025 12:40:29	23ec10ja60@mitsgwl.ac.in	Jahanvi sharma	0901EC231058	Electronics engineering	5th	7748047932
9/13/2025 12:42:40	23ec10tr143@mitsgwl.ac.in	Trivesh Bisen	0901EC231141	Electronics	5th	9302259469
9/13/2025 12:52:48	23ec10ak10@mitsgwl.ac.in	Akash Shukla	0901EC231010	Electronic,s Engineering	5th	8629946955
9/13/2025 13:05:03	23ec10ar23@mitsgwl.ac.in	Arpit Gupta	0901EC231023	Electronics	5th	9074147622
9/13/2025 13:08:36	23ec10an16@mitsgwl.ac.in	Anshu Gupta	0901EC231016	Electronics Engineering	5th	8962250437

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA
Deemed to be University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE
DEPARTMENT OF ELECTRONICS ENGINEERING

9/13/2025 13:09:15	23ec10ad7@mitsgwl.ac.in	Aditya goyal	0901EC231007	Electronics	5th	9111588362

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA
Deemed to be University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE
DEPARTMENT OF ELECTRONICS ENGINEERING
APPROVAL

Dr. Hemant Choubey <hemantchoubey271986@mitsgwalior.in>
To: vandanags@mitsgwalior.in

Mon, Sep 22, 2025 at 5:41 PM

---------- Forwarded message ---------
From: **Dr. Hemant Choubey** <hemantchoubey271986@mitsgwalior.in>
Date: Tue, Sep 9, 2025 at 12:28 PM
Subject: Permission to Organize an Expert Talk
To: Dr. Laxmi Shrivastava Elex <lselex@mitsgwalior.in>

Respected Sir,

With due respect, I would like to seek your kind permission to organize an **Expert Talk** at our institute on **AI and ML with Edge Device.** The session aims to provide students and faculty members with valuable insights into recent advancements and practical aspects of the subject area, thereby enhancing their academic and professional knowledge.

The details of the proposed expert talk are as follows:

- **Title of the Talk:** AI and ML with Edge Device

- **Proposed Date & Time:** 13/09/2025,Time:11A.M to 1 P.M

- **Mode:** Online

- **Faculty Coordinator:** Dr. Hemant Choubey and Prof. Vandana Bhatt

- **Resource Person:** Mr. Amit Singh, R & D Engineer, Scientec Technologies Pvt Ltd.

Kindly grant us permission to proceed with the necessary arrangements for this event.

Thanking you in anticipation.

Yours sincerely,
Dr. Hemant Choubey
Assistant Professor
Department of Electronics Engineering
MITS, Gwalior

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA
Deemed to be University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE
DEPARTMENT OF ELECTRONICS ENGINEERING

APPROVAL

Dr. Hemant Choubey <hemantchoubey271986@mitsgwalior.in>   Mon, Sep 22, 2025 at 5:42 PM
To: vandanags@mitsgwalior.in

---------- Forwarded message ----------
From: **Dean Students** <deanstudents@mitsgwalior.in>
Date: Wed, Sep 10, 2025 at 1:18 PM
Subject: Fwd: Permission to Organize an Expert Talk
To: Dr. Hemant Choubey <hemantchoubey271986@mitsgwalior.in>
Cc: Dr. Laxmi Shrivastava <srivastaval@mitsgwalior.in>

Permitted.

---------- Forwarded message ----------
From: **DR. M.K. SAGAR** <mksagar@mitsgwalior.in>
Date: Tue, 9 Sept 2025 at 21:56
Subject: Fwd: Permission to Organize an Expert Talk
To: Dean Students <deanstudents@mitsgwalior.in>

---------- Forwarded message ----------
From: **Dr. Laxmi Shrivastava Elex** <selex@mitsgwalior.in>
Date: Tue, 9 Sept 2025 at 14:52
Subject: Permission to Organize an Expert Talk
To: DR. M.K. SAGAR <mksagar@mitsgwalior.in>

---------- Forwarded message ----------
From: **Dr. Hemant Choubey** <hemantchoubey271986@mitsgwalior.in>
Date: Tue, Sep 9, 2025 at 12:29 PM
Subject: Permission to Organize an Expert Talk
To: Dr. Laxmi Shrivastava Elex <lselex@mitsgwalior.in>

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA
Deemed to be University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE
DEPARTMENT OF ELECTRONICS ENGINEERING

CERTIFICATE OF PARTICIPATION

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA
Deemed to be University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE
DEPARTMENT OF ELECTRONICS ENGINEERING
Glimpse of Industrial Visit at Smart Control India Ltd. Malanpur, Gwalior

GLIMPSE OF THE EXPERT TALK

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA
Deemed to be University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE
DEPARTMENT OF ELECTRONICS ENGINEERING

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA
Deemed to be University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE
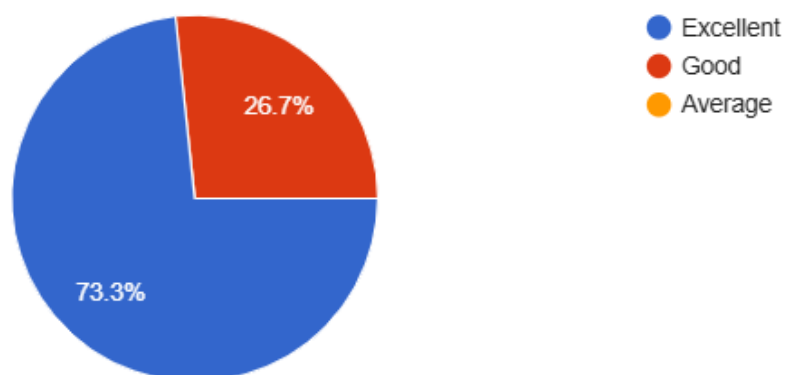## DEPARTMENT OF ELECTRONICS ENGINEERING

Dr. Hemant Choubey   **Prof. Vandana T. Bhatt**   **Dr. Laxmi Shrivastava**
(Coordinator)   (Coordinator)   (HoD)

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA
Deemed to be University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE
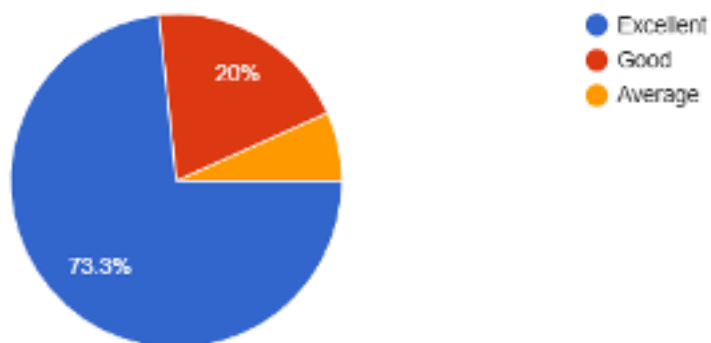## DEPARTMENT OF ELECTRONICS ENGINEERING
FEEDBACK

How useful was the session for your knowledge/skills?

30 responses
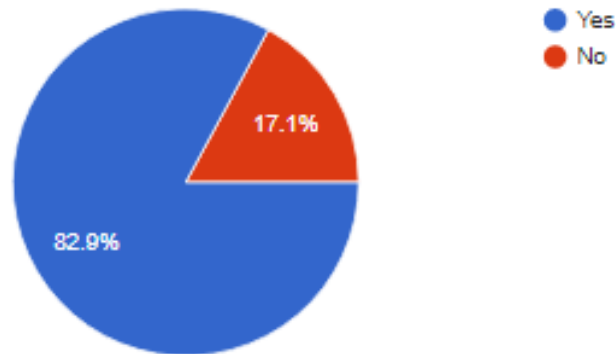

How would you rate the clarity of the expert's delivery?

30 responses

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA
Deemed to be University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE
DEPARTMENT OF ELECTRONICS ENGINEERING

After this training, do you think, you can handle the assigned task?

41 responses

- Yes
- No

17.1%

82.9%

Will you recommend your friends or juniors for this visit in future?

41 responses

- Yes
- No

97.6%

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA

Deemed to be University

(Declared under Distinct Category by Ministry of Education, Government of India)

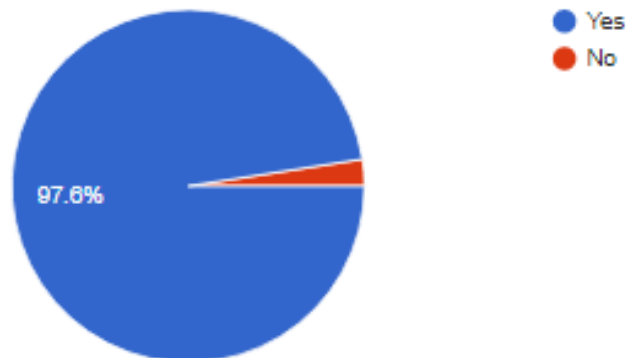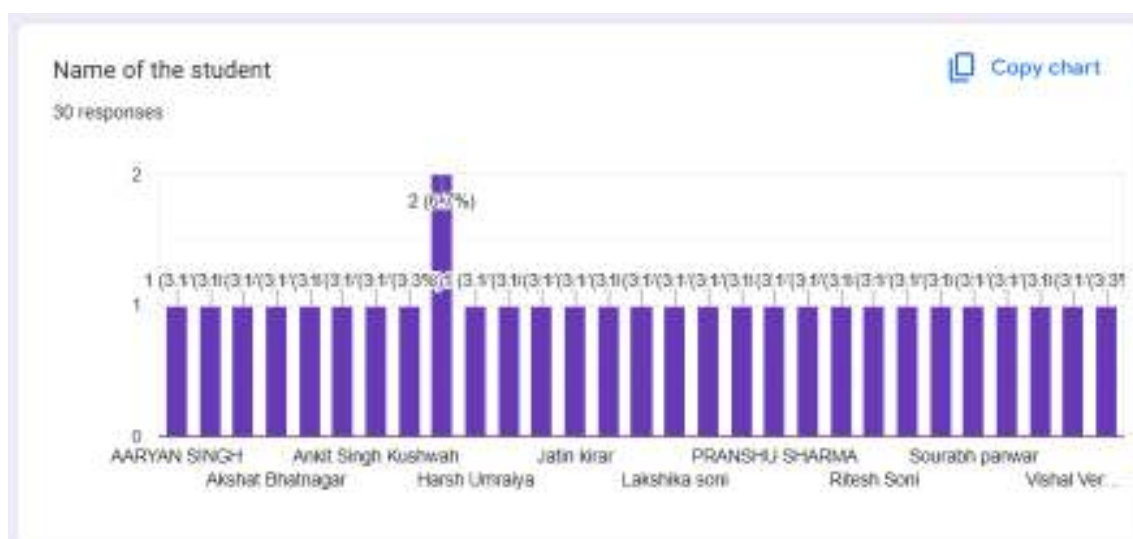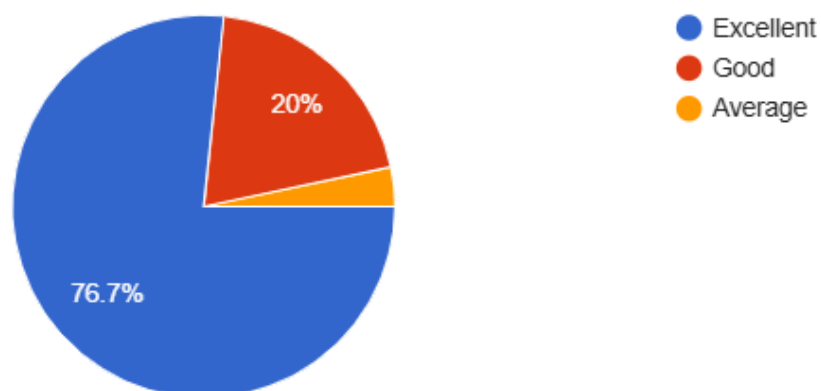**NAAC ACCREDITED WITH A++ GRADE**

DEPARTMENT OF ELECTRONICS ENGINEERING

How would you rate the overall organization of the session?

30 responses

Name of the student

30 responses

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P), INDIA
Deemed to be University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE
DEPARTMENT OF ELECTRONICS ENGINEERING

Enrolment No.

30 responses

Any other comments

16 responses

Good
Long lectures may be very efficient
Absolutely, good for AIML this session
-
Good
Nice this session
Thank you for your guidance and support.
Excellent & interactive session for me ✨
Person given good presentation.