

### A DAILY NEWSLETTER

**Editor in Chief** 

**Editors** 

Dr. Srinivasan Alavandar Principal, ACT Ms. B. Rashmi, AP-BME Ms. S.Marlin, AP - AI&DS R. Deepan, Student - AI&DS

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#### PLACEMENT DRIVE



Final year CSE,I T, Mech, EEE,ECE, Mechtronics, Mech&Auto, Civil, Aerospace attended the Virtual Technical Group Discussion scheduled by Coapps.

Coapps provide well-established delivery methods, effective communication protocols, and utilization of premium software and hardware tools guarantee consistent results and continuous customer satisfaction.

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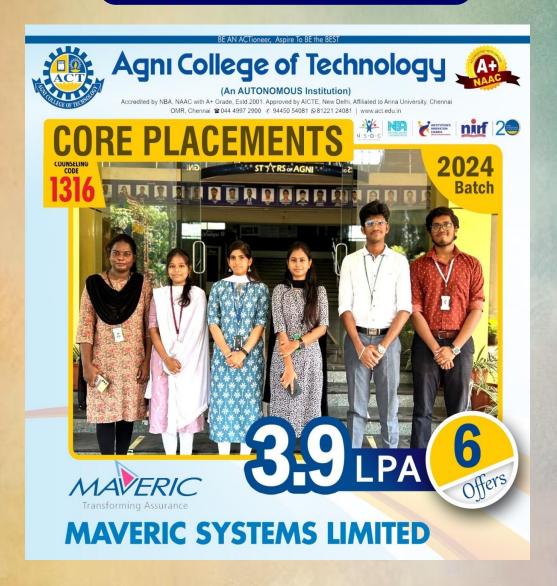




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#### **PLACEMENT NEWS**



Final Year CSE and IT (6 students) got placed in Maveric Systems Limited with a salary package of 3.9 LPA.

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#### PLACEMENT NEWS



Final Year Aerospace (4 students) got placed in Garuda Aerospace Pvt Ltd with a salary package of 3 LPA.

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#### PLACEMENT NEWS



Final Year MHT, MAE, Mechanical and Civil students were given Milekal Engineering Pvt Ltd. Company specific training from Oct 17<sup>th</sup> to Oct 20<sup>th</sup> by Mr. K.Saravanan AP Mech, Mr. Karthikeyan AP MHT and Mr. Vishnu Vardhan AP Civil . Milekal is one of the fast growing flagships design & detailing solution company in global market.

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Gethsiyal A. III Year Student, Electronics and Communication Engineering ,member of a ball badminton women team secured 3<sup>rd</sup> position in Anna University Zonal Tournaments 2023-2024 held at Thangavelu Engineering College from 16.10.23 to 17.10.23.

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#### STUDENT ACHIEVEMENT

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U		ZONAL TOURNAMENTS 2023 - 2024  CERTIFICATE OF MERIT			
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	of	Res	gister no 312822 104098	<u> </u>	
V	branch	CSE College	oni College of Techr	00/08/7	
E	zone3	was a member of		team	
	secured First /	secured First / Second / Third Position in the Anna University Zonal Tournaments 2023 - 2024 held at Fingine or ing College			
R	held at	Thangavely Engineerin	g College D II D	Jinlan	
S		2023 to 17 10 2023	event Ball So	dm11/1-10t1	
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T	Wh.	Darret	7/100	71.001	
Y	Local Sports Coordin	nator Local Sports Secretary	Zonal Sports Coordinator	Zonal Sports Secretary	

Sowmiya R, II year student, Department of Computer Science and Engineering has secured **third position** in the **Anna University Zonal Tournaments** 2023- 2024 held at Thangavelu Engineering College from 16/10/2023 to 17/10/2023 event **Ball Badmiton**.

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Ernst-Abbe-Hochschule Jena

University of Applied Sciences

Akademisches Auslandsamt | International Office

Application-Nr.: 20164

03641 205 656

Email: scientific-instrumentation@eah-jena.de

Date: 4-Sep-23

This document is a translation of the German original provided for the personal use of the applicant only!

Admission for Ernst-Abbe-Hochschule (EAH) Jena 1st semester

Surname: Mukesh Devan Given name: Leeben Davis Gender: M DOB: 16.06.2001 POB: Chennai Nationality: IND

is granted admission to the restricted Master's programme of Scientific Instrumentation for the upcoming winter intake 2023/24. The course has a standard period of study of 4 semesters. The medium of instruction is English. Admission is granted unconditionally. For the enrolment, the applicant has to provide the following original documents:



Leaving certificate (diploma) of senior secondary school + certified copy

Certificate (or provisional certificate) of university degree + certified copy

Certificate (or provisional certificate) of university courses taken with marks + certified copy

English language proficiency certificate valid upon application, minimum requirement: IELTS 6.0 Overall Band

Score TOEFL paper-based 550 points, TOEFL internet-based TOEFL 79 points

A valid passport or other identification documents

APS certificate (digital version only)

Ernst-Abbe-Hochschule Jena · Postfach 10 03 14 · 07703 Jena

Leeben Davis Mukesh Devan

600074 Pozhichalur, Chennai

7/311, Gilgal Cottage, TTK Nagar

Leeben Davis Mukesh Devan, 2018-2022 Batch. Department of Mechatronics Engineering has been granted admission to the **Master's programme** of **Scientific Instrumentation** for 2023-24 at **Ernst-Abbe-Hochschule** Jena - University of Applied Sciences, Germany.

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Janani K, II year student, Department of Mechatronics Engineering has successfully completed an **online course** on **AutoCAD layouts 2023** on 16<sup>th</sup> October 2023 provided by **Mindluster** Educational Platform.

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mindluster

Signature

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Provided by

Great Learning Academy

(On October 2023)

To verify this certificate visit verify mygreatlearning.com/AAH

Saravanakrishnan M, II year student, Department of Mechatronics Engineering has successfully completed an **online course** on **Virtual Cloud Computing** in October 2023 provided by **Great Learning Academy**.

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#### **FACULTY ACHIEVEMENT**

International Journal on Interactive Design and Manufacturing (IJIDeM) https://doi.org/10.1007/s12008-023-01597-x

ORIGINAL PAPER



Optimization of cold spray coating parameters using RSM for reducing the porosity level of AA2024/Al<sub>2</sub>O<sub>3</sub> coating on AZ31B magnesium alloy

M. Ashokkumar<sup>1</sup> • D. Thirumalaikumarasamy<sup>1</sup> • Tushar Sonar<sup>2</sup> • P. Vignesh<sup>3</sup> • S. Deepak<sup>4</sup>

Received: 13 August 2023 / Accepted: 7 October 2023 © The Author(s), under exclusive licence to Springer-Verlag France SAS, part of Springer Nature 2023

#### Abstract

The AZ31B magnesium (Mg) alloy is increasingly finding applications in the aerospace and automotive industries due to its high strength to weight ratio, lower density and good castability. However, the inferior corrosion resistance of these alloys restricts its employability in many engineering applications. To overcome this issue, the Mg alloy is are coated with AA2024 alloy/Al2O3 coating deposited using cold spay coating (CS) process. The minimum level of porosity is important for the superior performance characteristics of these coatings such as hardness and corrosion resistance. The Al alloy coatings when deposited on Mg alloys are susceptible to the formation of porosities. The porosity level can be controlled when coated using the optimum level of processing parameter. So, the main objective of this investigation is to optimize the CS coating parameters for minimizing the porosity level in AA20224/Al<sub>2</sub>O<sub>3</sub> coating deposited on A31B Mg alloy. The CS coating parameters, such as temperature (°C), stand-off distance (mm), and powder feed rate (g/min), were optimised using response surface methodology (RSM). The design expert software was employed to generate the 3D response surfaces and regression-based porosity prediction model. The porosity prediction models were validated statistically using analysis of variance (ANOVA). The effect of cold spray processing parameters on the porosity level of an AA20224/Al<sub>2</sub>O<sub>3</sub> coating deposited on an AZ31B Mg alloy was analysed using 3D response surfaces. The results showed that the AA20224/Al<sub>2</sub>O<sub>3</sub> coating deposited on AZ31B Mg alloy exhibited the minimum porosity level of 2.0 vol% (actual) and 2.32 vol% (predicted) when cold sprayed using a temperature of 520°C, stand-off distance of 12 mm, and a powder feeding rate of 22 g/min. The regression-based porosity prediction model accurately predicted the porosity (vol%) level of AA2024/Al<sub>2</sub>O<sub>3</sub> coating deposited on AZ31B Mg alloy with less than 7.5% error and 95% confidence level. The RSM results predicted porosity level of 1.845 vol% for AA20224/Al<sub>2</sub>O<sub>3</sub> coating cold sprayed on AZ31B Mg alloy using a temperature of 527.77°C, stand-off distance of 9.59 mm, and a powder feeding rate of 22.58 g/min. The ANOVA results revealed that the deposition temperature has a greater effect on the porosity level of cold-sprayed AA20224/Al<sub>2</sub>O<sub>3</sub> coating, followed by stand-off distance and powder feeding rate.

 $\textbf{Keywords} \ \ AZ31B \ magnesium \ alloy \cdot \ AA2024/Al_2O_3 \ coating \cdot \ Cold \ spray \ coating \cdot \ Porosity \cdot \ Optimization \cdot \ Response surface \ methodology$ 

Dr. Deepak Sampathkumar, Assistant Professor, Department of Mechanical & Automation Engineering has Published a Research Article entitled "Optimization of cold spray coating parameters using RSM for reducing the porosity level of AA2024/AI2O3 coating on AZ31B magnesium alloy", International Journal on Interactive Design and Manufacturing (IJIDeM), Springer Nature, in the Web of Science Journal –SCI, Published on 15<sup>th</sup> October 2023.

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#### **FACULTY ACHEIVEMENT**



Office of the Controller General of Patents, Designs & Trade Marks Department of Industrial Policy & Promotion, Ministry of Commerce & Industry, Government of India



Application Details				
APPLICATION NUMBER	202341059449			
APPLICATION TYPE	ORDINARY APPLICATION			
DATE OF FILING	05/09/2023			
APPLICANT NAME	1 . S. Venkateswaran 2 . R. Beaula Jasmine 3 . E.Vinodha 4 . Briskilal J 5 . Dr.R.Kalaivani 6 . Dr. Chidambararaj Natarajan 7 . D S Eneeya Sri 8 . Dr.Rajasekhar Pinnamaneni 9 . Dr.J.Senthil Murugan 10 . Ms. Herlin Rose A P			
TITLE OF INVENTION	RECYCLING OF WASTE WATER & WATER MANAGEMENT INTO IRRIGATION WATER IN SMART CITIES USING IOT			
FIELD OF INVENTION	MECHANICAL ENGINEERING			
E-MAIL (As Per Record)	vaagaiip@gmail.com			
ADDITIONAL-EMAIL (As Per Record)				
E-MAIL (UPDATED Online)				
PRIORITY DATE				
REQUEST FOR EXAMINATION DATE				
PUBLICATION DATE (U/S 11A)	06/10/2023			

Mrs.R.Beaula Jasmine, Head, Mr.S.Venkateswaran, Mrs.E.Vinodha Assistant Professor, Department of Civil Engineering have filed the patent of their innovation on title Recycling of waste water and water Management into Irrigation Water in Smart Cities Using IOT on 6<sup>th</sup> October 2023

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#### STUDENT PARTICIPATION



### Ankith Vipul .V

has successfully completed the online course:

#### Introduction to Data Science

This professional has demonstrated initiative and a commitment to deepening their skills and advancing their career. Well done!

28th Sep 2023





Ankith Vipul V, II year student, Department of Computer Science and Engineering has completed an online certificate in organized by SkillUP on 28<sup>th</sup> September 2023"Introduction to Data Science".

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#### STUDENT PARTICIPATION





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(On October 2023)

Gokul D, II year student of the Department of Computer Science and Engineering has completed an online certificate in "Data Science Foundations" organized by Great Learning on October 2023.

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#### STUDENT PARTICIPATION



Jayasudha B, II year student, Department of Computer Science and Engineering has participated in the event "**Tech Quiz**" held on 19<sup>th</sup> October 2023 at Jeppiaar School of Engineering and Technology, organized by A National Level Symposium NEXODUS 2K23.

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#### MINI PROJECT EXHIBITION

The Department of AI and DS organized a mini-project expo 2023 on October 20th from 9.00 a.m.—3.45 p.m. in the seminar hall. II-year and III-year AI&DS students displayed 52 prototype models. Resource persons Mr. Mithun Jayan, C.E.O. of RIVA, and Mr. Govindaarun D, Head/ERP Operations, VA Tech WABAG Ltd. examined the prototypes, and the best projects were awarded a cash prize.

1<sup>st</sup> place won by Twarakeshan & Kishore of II year -1000 rupees

2<sup>nd</sup> place won by Deepan & Arjun of II YEAR-750 rupees 3<sup>rd</sup> place won by Kishoth & Shivaranjini of III YEAR – 500 rupees

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### **GALLERY**





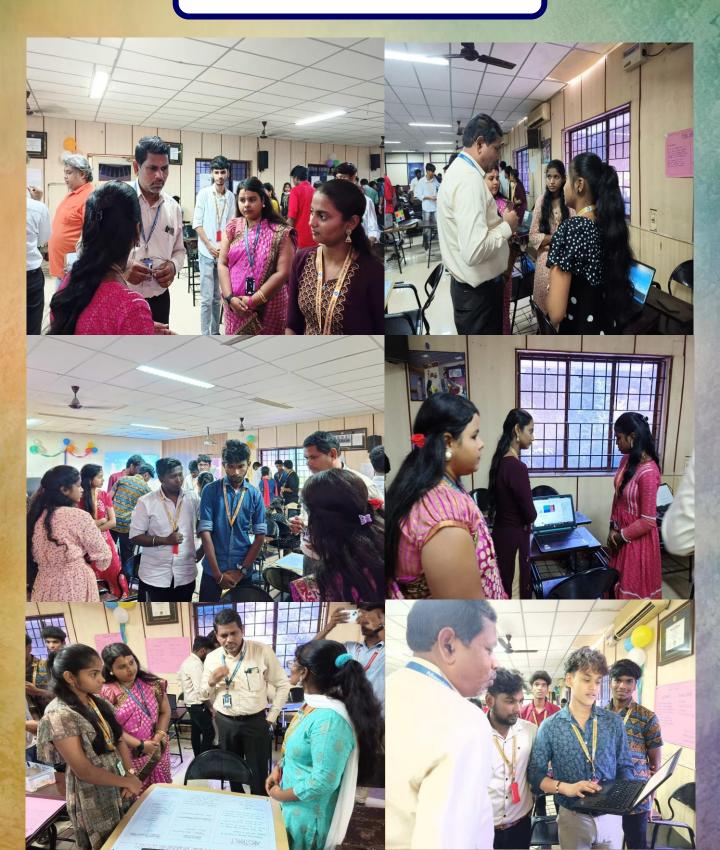




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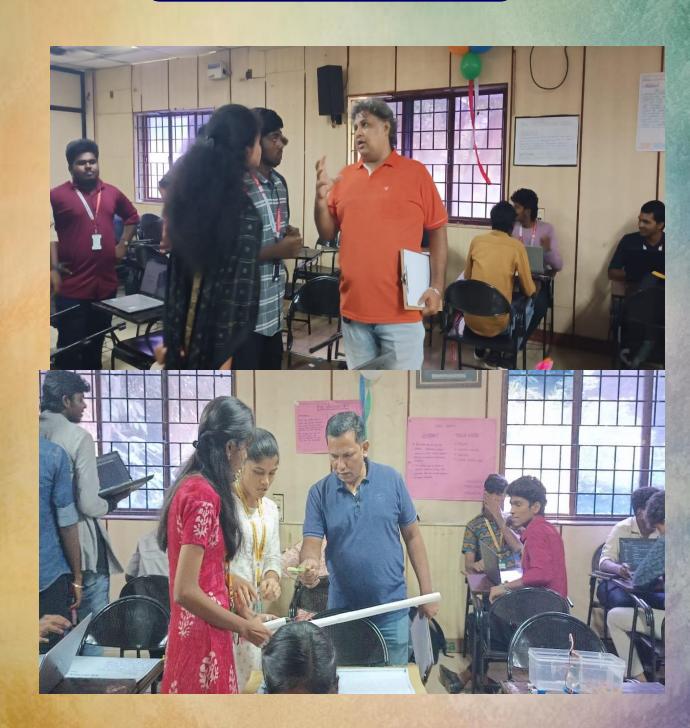




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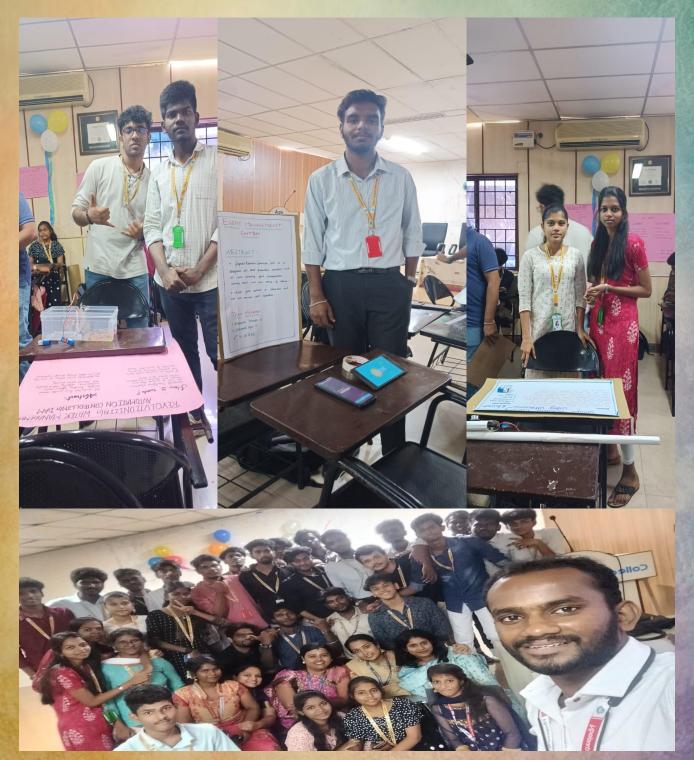
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### **CLASS COMMITTEE MEETING -2**



The third-year aerospace engineering second committee convened on October 19, 2023, and the meeting was chaired by Dr. S.K. Narendranathan. The meeting centered on planning syllabus coverage for the upcoming IAT2 and material distribution, while also seeking input from students and faculty feedback on improving the teaching and learning methodology, which are noted as improvement points.

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### **CLASS COMMITTEE MEETING -3**



The final-year aerospace engineering third class committee convened on October 19, 2023, and the meeting was chaired by Dr. S.K. Narendranathan. The meeting centered on planning syllabus coverage for the upcoming model examination and material distribution, while also seeking input from students and faculty feedback on improving the teaching and learning methodology, which are noted as improvement points.

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#### **AYUDHA POOJA CELEBRATION**





On October 20, 2023, the Department of Aerospace Engineering had an ayudha pooja with Dr. Srinivasan Alavendar, Principal-ACT, Dr. S. K. Narendranathan, HoD-ASE, and Mr. Ramamoorthy, HR-ACT. There were all of the faculty from the aerospace engineering department. Faculties and students exchanged happy memories and gave sweets together.

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### AYUDHA POOJA CELEBRATION

GALLERY (AEROSPACE)











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# AI & DS DEPARTMENT NAVARATHRI CELEBRATIONS 2023



The Department OF AI&DS, along with students and department faculties, celebrated the Navarathri Pooja in the AIDS Department with Chakraipongal Neivedhyam. It was celebrated for the well-being of all department students and faculties on October 20, 2023.

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# ENTREPRENEURSHIP DEVELOPMENT CELL ACTIVITY



Entrepreneurship Development Cell in association with Institution's Innovation Council (IIC 6.0) has organised The Seminar on the topic of "Entrepreneurship: Its role in Engineering Education", This seminar was handled by the resource person Mr. Ramhari Gopalakrishnan, the C.E.O OF GEO foods and all the department EDC registered students attended the seminar. This seminar encouraged the students to see the value of Entrepreneurship in Engineering and the potential for Innovation at the Intersection of Technology

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#### **DEPARTMENT ACTIVITY**







The Department of Mechatronics Engineering, in association with IIC, has organized a session on **Problem Solving and Ideation Workshop** coordinated by Mr.S.Karthikeyan, Assistant Professor, Department of Mechatronics Engineering for the II, III & IV year students on 19<sup>th</sup> October 2023. The guest, Ms.Anbumathi, Design Thinking Expert and Innovation Expert, Founder of Resources Lifescience & Head – Business Strategies of inDERMA Medical Devices encouraged the students to realize their inner potential and facilitate the positive transformation from students to entrepreneurs.

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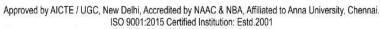


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#### STUDENTS ACTIVITY





The Department of Civil Engineering, III Year Students, have convened seminar as part of curriculum internal evaluation components for the course Prefabricated Structures on topic **Introduction to Progressive Collapse** which was conducted by Mrs. E.Vinodha, Assistant Professor & Subject Incharge.

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### **PROJECT REVIEW MEETING**





Department of Electronics and Communication Engineering conducted project review meeting for IV year students to review their title selection, and methods by the committee of Ms. Maheswari, Ms. Chitra, and Ms. Elayarani, Assistant Professors, and Dr. Sridhathan, Associate Professor with Dr. N.V.S. Sree Rathna Lakshmi, Professor/Head.

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#### **POOJA CELEBRATIONS**



Saraswati and Ayutha Pooja, the festival to celebrate the goddess of learning, music and worship of tools, was celebrated with much enthusiasm and vigour by the students and staff of Electronics and Communication Engineering department. The celebration helped the students to stay in touch with the customs of our country, learn the qualities of team work, leadership and cooperation as well as strengthen the bond between students and faculties of the department.

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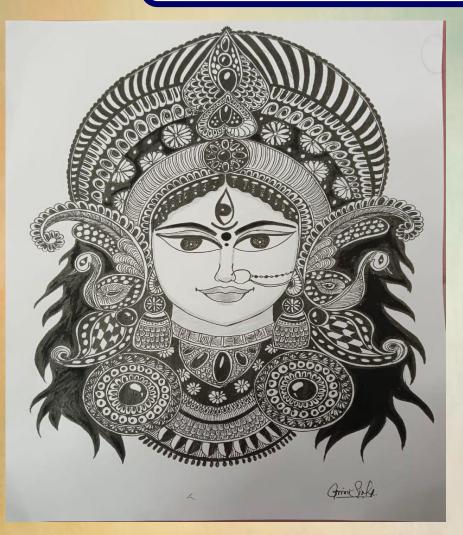
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#### **STUDENT PORTRAITS**





Ginni Sinha, III year student, Department of computer science and Engineering has done a pencil art on some portraits.

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#### DEPARTMENT ACTIVITY











The Department of Mechatronics Engineering has organized a event on Metal Fusion - Soldering Competition coordinated by Mr.T.Srinivasan, Assistant Professor, Department of Mechatronics Engineering as a part of MechatronNex Club, for the II year students on 14<sup>th</sup> October 2023. The students felt exciting and educational, accomplishing a chance to hone their soldering skills in assembling electronic circuits on PCBs. Top 3 participants were awarded with certificate based on the quality of connections and adherence to safety guidelines.

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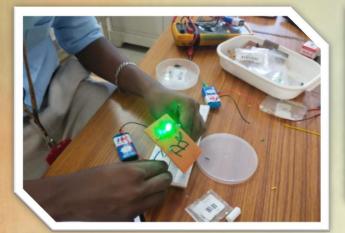


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