

IGNITE 2023



A DAILY NEWSLETTER

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STUDENT ACHIEVEMENT



Akshaya. J, I year student (BME), Department of Science and Humanities has completed the online course on **Python Basic Programs** offered by Great Learning Academy in the month of October 2023.

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FACULTY ACHIEVEMENT

JMEPEG
https://doi.org/10.1007/s11665-023-08898-y

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1059-9495/\$19.00

Check for updates

ORIGINAL RESEARCH ARTICLE

Response Surface Methodology and Mayfly Optimization for Predicting the Properties of Cold-Sprayed AA2024/ Al₂O₃ Coatings on AZ31B Magnesium Alloy

Ashokkumar Mohankumar , Thirumalaikumarasamy Duraisamy, Vignesh Packkirisamy, and Deepak Sampathkumar

Submitted: 14 August 2023 / Revised: 5 October 2023 / Accepted: 14 October 2023

Magnesium (Mg) alloys are used more often today in the automotive and aviation industries. Owing to their many beneficial characteristics, such as higher thermal conductivity, greater strength, lower density and weight, etc., magnesium alloys tend to corrode when employed in particular moist regions, and their poor wear characteristics may reduce their lifespan. To deal with such challenges, a surface coating technique was used on the AZ31B Mg alloy with AA2024/Al₂O₃ coating powder through a cold spray process. The porosity, corrosion, and wear rate of the deposited Mg alloy are investigated. Box–Behnken designs (BBD) are used to plan the experimental investigation. The results were verified using the Mayfly optimization technique in MATLAB 2021, which relies on a hybrid deep belief network, and also through the BBD-response surface methodology (RSM) in Design Expert 11. The metal matrix composite coating has a minimal porosity, corrosion rate, and wear loss of 0.52%, 1.35 mm/year, and 0.52 mg, experimentally. As a result, the hybrid deep belief network-mayfly optimization estimated results are more similar to the results compared to the BBD-RSM.



designs, cold spray, corrosion, mayfly porosity, wear

dampening capabilities and noise reduction delivered by their electromagnetic insulation, magnesium alloys have supplanted plastics in the electronics sector (Ref 6-8). The poor wear characteristics of magnesium alloys, however, may reduce the durability of their life when used in specific humid regions. By depositing a coating on the Mg alloy, the worst corrosion and

Dr. Deepak Sampathkumar, Assistant Professor, Department of Mechanical & Automation Engineering has Published a Research Article entitled “Response Surface Methodology and Mayfly Optimization for Predicting the Properties of Cold-Sprayed AA2024/ Al₂O₃ Coatings on AZ31B Magnesium Alloy”, Journal of Materials Engineering and Performance (JMEPEG), Wiley and Springer Nature, in the Web of Science Journal –SCI, Impact Factor: 2.3, Published on 2nd November 2023.

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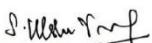
FACULTY PARTICIPATION

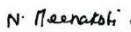


Allied Health Sciences
Chettinad Academy
of Research and Education
(Deemed to be University)

CERTIFICATE OF PARTICIPATION

This certificate is awarded to Dr./Mr./Ms. Dr.S.Shunmuga kani of
Agni college of technology
has participated in the International Conference (Online Mode) on "**Functional Nanomaterials and Nanodevices (ICFNN 2023)**"
organized by Faculty of Allied Health Sciences, Chettinad Academy of Research and Education, Kelambakkam, Tamil Nadu, India
on 26th September 2023.


Dr. S. Weslen Vedakumari
Convenor
FAHS, CARE


Dr. N. Meenakshi
Dean,
CHRI


Dr. Sridhar. R
Vice-Chancellor,
CARE



e-Certificate

Dr. S. Shunmugakani, Associate Professor, Department of Science and Humanities (Chemistry) has participated in the **International conference (Online Mode) on Functional Nanomaterials and Nanodevices** organized by Faculty of Allied Health Sciences, Chettinad Academy of Research and Education, Kelambakkam, Chennai on 26th September 2023.

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FACULTY PARTICIPATION



VELS
INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED STUDIES (VISTAS)
(Deemed to be University) (Estd. as U-2 of the UGC Act, 1956)
PALLAVARAM - CHENNAI

DST - SERB Sponsored
International Conference on
Advanced Energy Materials and Energy Storage
(ICAEMES-2023)

Certificate of Presentation

This is to certify that Dr./Mr./Ms. S SWATHI has
presented research paper Oral / Poster / Thesis Entitled INVESTIGATION OF POLYURETHANE - GRAPHENE AND CHITOSAN - SILVER - GRAPHENE NANO COMPOSITES USING SMALL NEUTRON SCATTERING AND BROADBAND DIELECTRIC SPECTROSCOPY in the
International Conference on Advanced Energy Materials and Energy Storage (ICAEMES-2023)
held on 12th & 13th October 2023 organized by Department of Chemistry, School of Basic Sciences,
VISTAS, Chennai - 600117.

Dr. S. Kotteswaran
Convenor, ICAEMES-2023
VISTAS

Dr. R.A. Kalaivani
Dean, School of Basic Sciences
VISTAS

Dr. P. Saravanan
Registrar
VISTAS

Dr. S. Sriman Narayanan
Vice-Chancellor
VISTAS

Dr. S. Swathi, Assistant Professor, Department of Science and Humanities (Physics) has presented research thesis entitled **Investigation of Polyurethane-Graphene and Chitosan-Silver-Graphene Nanocomposites using Small Neutron Scattering and Broadband Dielectric Spectroscopy** in the International Conference on Advanced Energy Materials and Energy Storage (ICAEMES-2023) organized by Department of Chemistry, School of Basic Sciences, VISTAS, Chennai, held on 12th & 13th October 2023.

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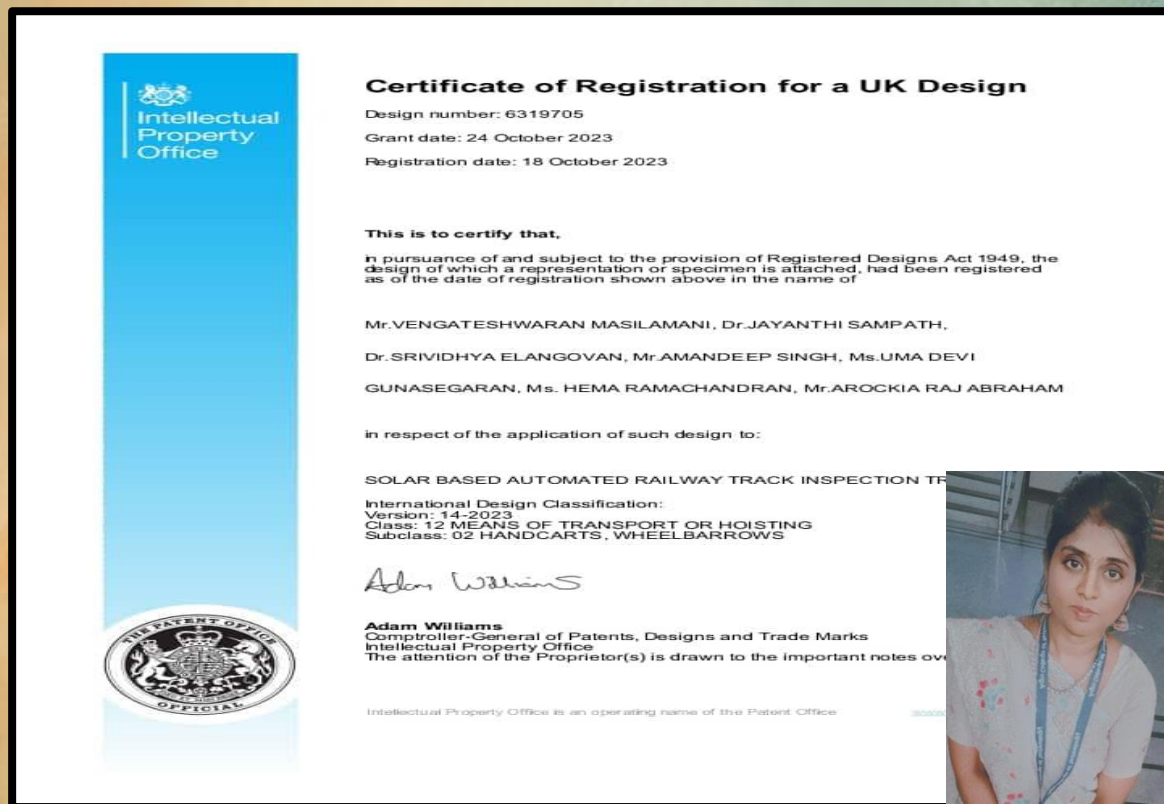


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STUDENT PARTICIPATION



"Mrs. Umadevi , Assistant Professor in the Department of Computer Science and Engineering, has published a patent article on '**SOLAR BASED AUTOMATED RAILWAY TRACK INSPECTION TROLLEY**', for her remarkable work in the field of innovation under the 'Certificate of Registration for a UK Design' granted on 24th October 2023.

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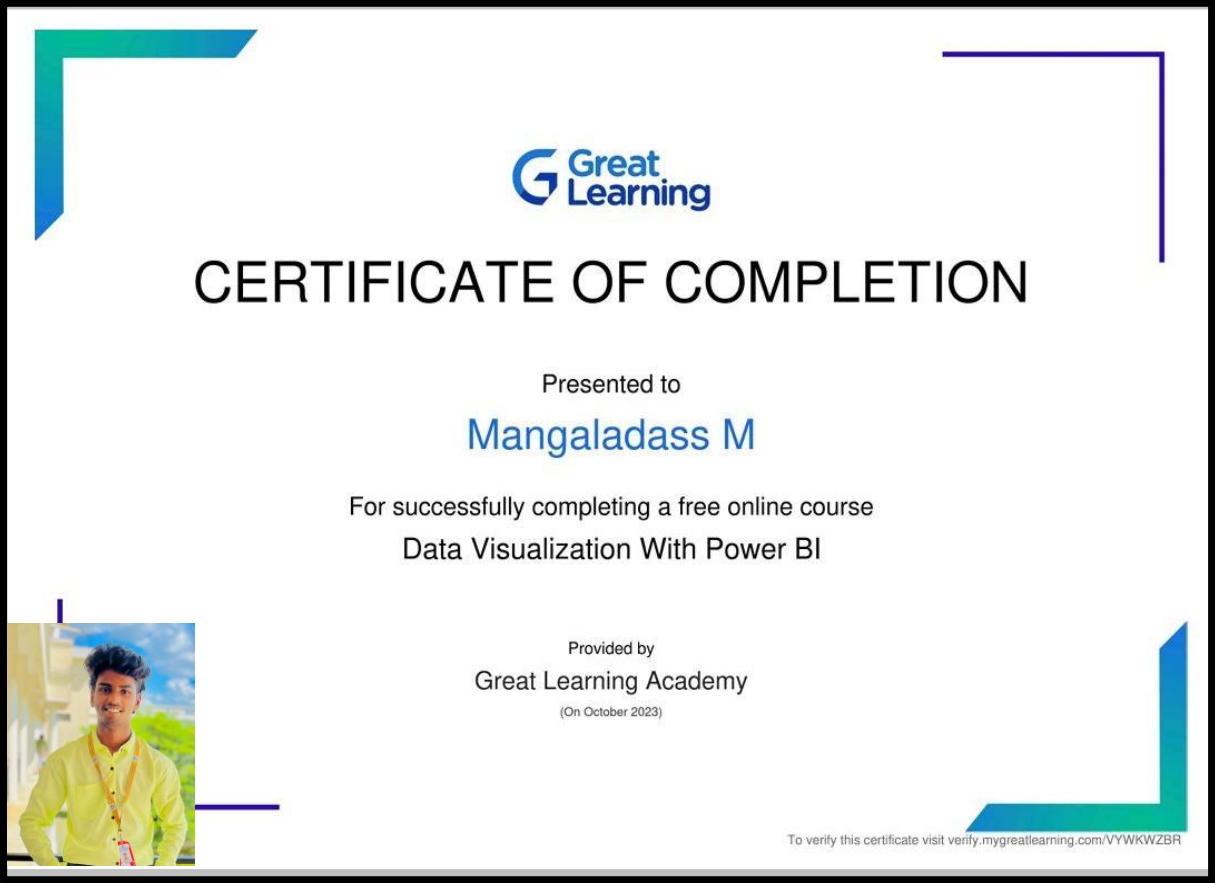
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STUDENT PARTICIPATION



MangaladassM, II year student , Department of Computer Science and Engineering has completed an online certificate in **Data Visualisation with Power BI** organized by Great Learning on October 2023.

STUDENT PARTICIPATION



Balaji S, II year student , Department of Computer Science and Engineering , has completed an online certificate in **Python for Machine Learning** organized by Great Learning on October 2023.

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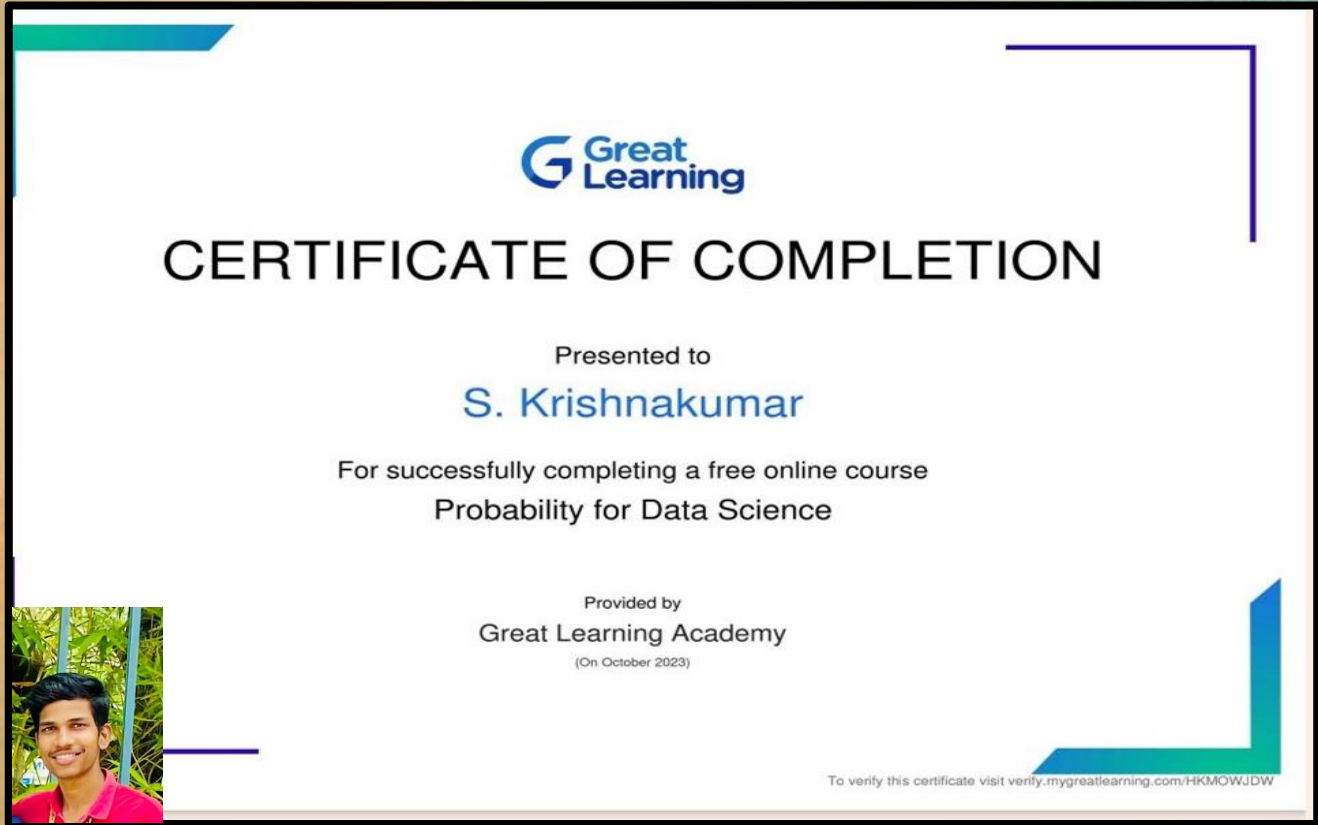


STUDENT PARTICIPATION



Gokul D, II year student , Department of Computer Science and Engineering has completed a course certificate in **Game Development** organized by mindluster on October 2023.

STUDENT PARTICIPATION



Krishnakumar S, II year student , Department of Computer Science and Engineering has completed an online certificate in **Probability for Data Science** organized by Great Learning on October 2023.

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STUDENT PARTICIPATION



Harshnee N, II year student of the Department of Computer Science and Engineering, has completed an online certificate in **Python for Machine Learning** organized by Great Learning on October 2023

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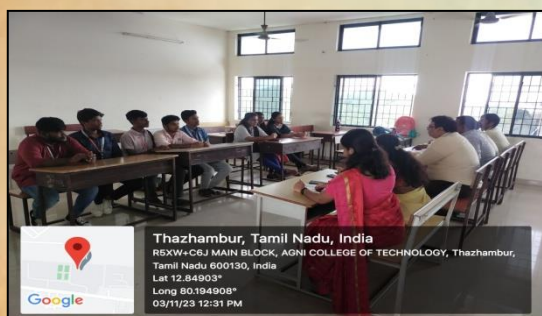


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CLASS COMMITTEE MEETING



Class committee meeting was conducted for IInd, IIIrd and IV year students . Portion coverage and problems faced by the students were discussed in the meeting. The meeting was chaired by Dr.P.Murugan, Head of Department and was attended by subject handling faculty members.

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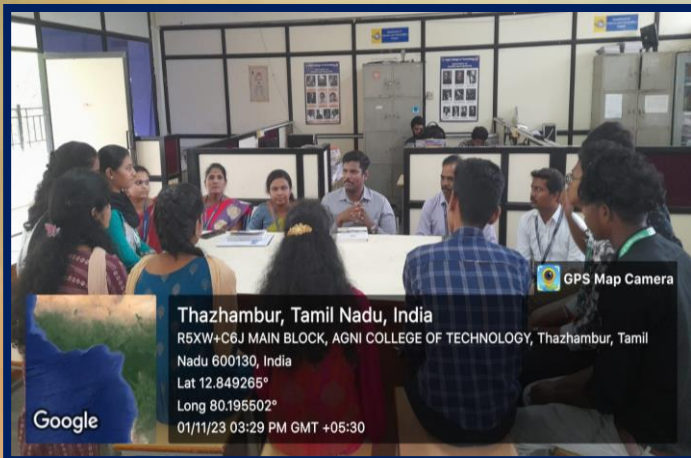
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CLASS COMMITTEE MEETING



The First Class Committee Meeting for I year students for the odd semester, 2023-24 has been conducted on 01.11.2023 at the Physics laboratory by the Department of Science and Humanities. Dr. Arul Kulandaivel, HoD headed the meetings for all the first year classes (Sections : A - K). The students were asked to represent their respective classes by giving feedback regarding the teaching and learning process. After discussing with the students, in order to meet the expectations of them, the HoD and the Class Committee Chairman have given various suggestions for the faculty members such as, giving notes & question banks, revising the topics if necessary, solving model university question papers, giving activities, giving home tests for the slow learners, conducting periodical slip tests, intense practices for slow learners, general queries etc.. The Head also insisted the faculty members to attain minimum 84% as a target during IATs, University examinations.

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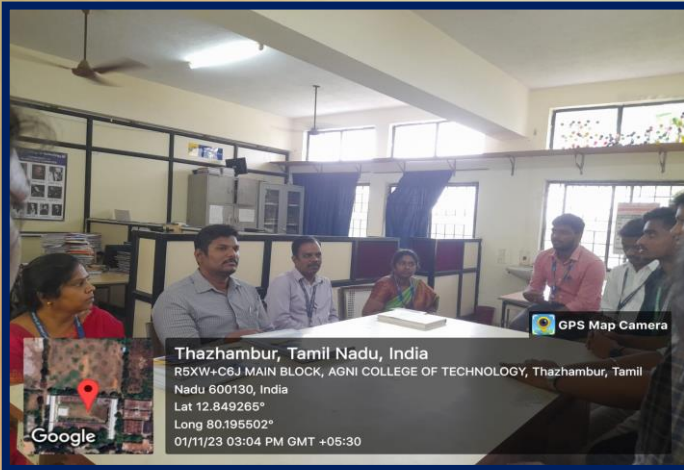
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GALLERY



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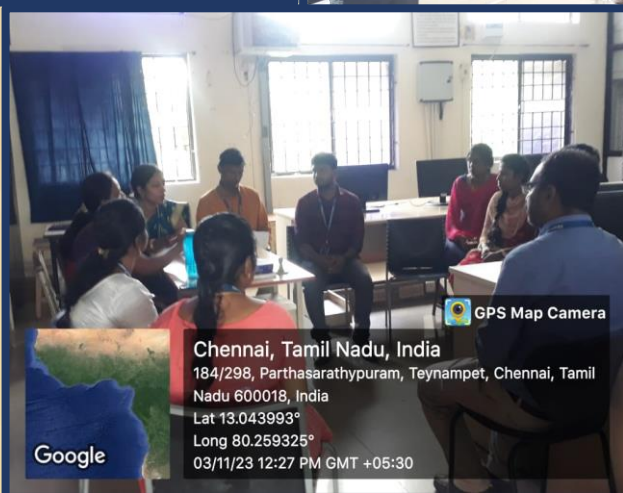
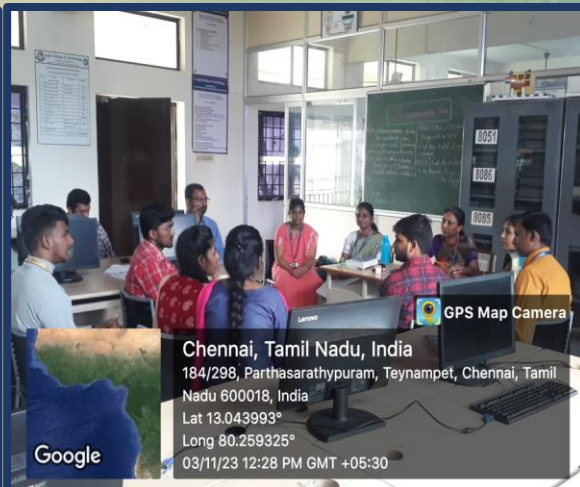
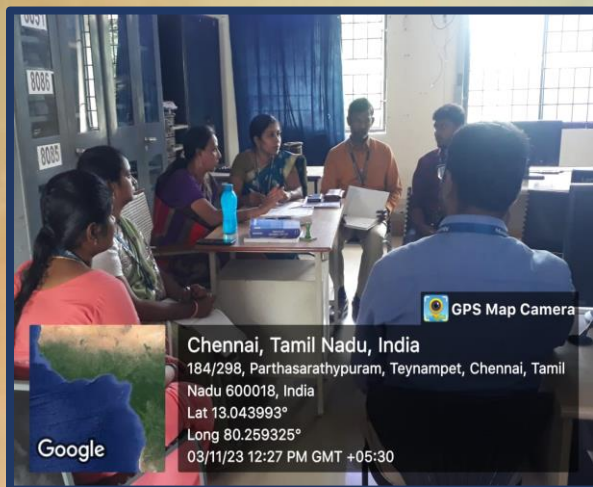
PARENTS TEACHERS MEETING



A Parents-Teachers meeting was held on November 2nd & 3rd in the department of biomedical engineering, The HOD, Class In charge, and subject handling faculty addressed the parents with their suggestions on their ward's academic performance and placements.

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CLASS COMMITTEE MEETING



Department of Electronics and Communication Engineering has conducted first class committee meeting for II Year students discussed syllabus coverage, students and faculty feedback with Dr. N.V.S. Sree Rathna Lakshmi, Professor/Head and all subject handling faculties.

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PARENT-TEACHERS MEETING



Dr.P.Murugan, Associate Professor and Head discussed with parents of IIIrd year student regarding his academic progress and preparedness for university examinations. Mr.N.Arunodhaya, class in-charge sharing his suggestions about their ward's improvement for the performance in the university examinations.

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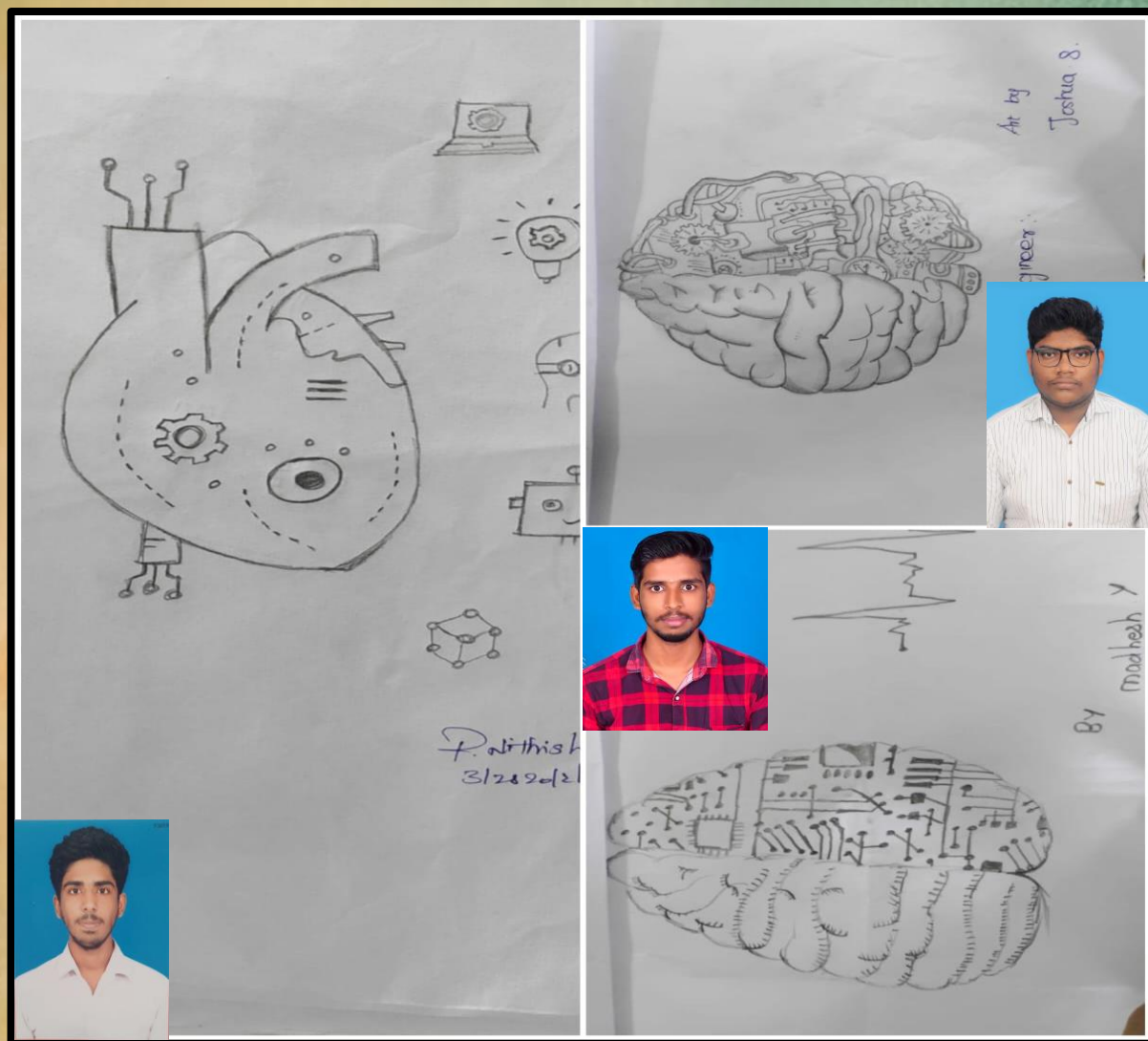


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STUDENT PARTICIPATION



A small activity was conducted in Department of biomedical engineering by our faculty on the topic “ DODDLE ART RELATED TO BIOMEDICAL “ on 28th October. The students of final year took part and expressed their talents.

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STUDENT REPOSITORY



K. U. Kamalapriya (CSE), I year student, the Department of Science and Humanities, has depicted the drawing of cat mandela Art.