

## Student Achievements

1. **Mr. Jaice Joseph (ENG21CT0011)** published a research article titled “**A Survey on transforming 2D images into immersive 3D Models**” at the International Conference on Advances in Engineering and Technology (AET-2024), jointly organized by ACEECom, AMAE, ACEE, on 30th December 2024.



2. **Mr. R Keertish Kumar (ENG21CT0032)** of 7<sup>th</sup> semester CST got selected in **CGI Inc** Campus Placement Drive organized by Department of Training and Placement on 16<sup>th</sup> January 2025.

3. Mr. Manoj N (ENG21CT0024), Mr. Manikanta (ENG21CT0022), Mr. Thanmay (ENG21CT0021), Mr. Tarun Pradeep (ENG21CT0045) and Prof. Ramandeep Kaur, Assistant Professor published a research article titled “Improvising Healthcare Data Security through Federated Learning and Blockchain Framework” at the 9th International Conference on Smart Trends in Computing and Communications on 29 - 31 January 2025.



4. Mr. Hemal (ENG21CT0009), Ms. Sohana (ENG21CT0037), Mr. Tarun Pradeep (ENG21CT0045) and Dr. M. Shahina Parveen, Professor published a research article titled “Predictive Modelling of Childhood Fever Prevalence: Leveraging Machine Learning in Maternal and Child Health” at the 9th International Conference on Smart Trends in Computing and Communications on 29 - 31 January 2025.



5. Mr. Jaice Joseph (ENG21CT0011), Mr. Hemal (ENG21CT0009), Mr. Krutharth (ENG21CT0016), Mr. Shashank Hegde (ENG21CT0036) and Prof. Ramandeep Kaur, Assistant Professor published a research article titled “Advancing Medical Imaging with AR: A Survey on transforming 2D images into immersive 3D Models” in GRENZE International Journal of Engineering and Technology in Feb 20. 2025.








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### Advancing Medical Imaging with AR: A Survey on Transforming 2D Images into Immersive 3D Models

**Journal:** GRENZE International Journal of Engineering and Technology  
**Authors:** Shashank Hegde, Jaice S Joseph, Krutarth Y G, Hemal S, Ramandeep Kaur  
**Volume:** 11 **Issue:** 1  
**Grenze ID:** 01.GJDET.11.1.564 **Pages:** 1210-1217

**Abstract**

Medical imaging technologies, such as Magnetic Resonance Imaging (MRI) and Computed Tomography (CT) scans, have revolutionized the medical field by offering precise and detailed visualizations of internal structures, aiding in diagnosing and treating complex conditions like tumors, fractures, and organ abnormalities. However, these images are typically presented as 2D slices, requiring medical professionals to mentally reconstruct 3D anatomical relationships. This process can lead to spatial perception errors and increased cognitive load, limiting diagnostic accuracy and surgical planning. Augmented Reality (AR) emerges as a transformative solution to break these limitations, allowing the conversion of 2D medical scans into interactive 3D models. AR enhances the visualization of complex anatomy, aids in treatment planning, and supports medical education by providing an intuitive and immersive experience for clinicians and students alike. Our project focuses on developing an AR-based tool using ARCore/ARKit to enable real-time 3D visualization of MRI and CT scans. This tool has the potential to improve diagnostics, streamline surgical procedures, and make medical education more engaging and effective, paving the way for better patient outcomes.

**GJDET**



**TITLE:**  
GRENZE International Journal of Engineering and Technology

**EDITOR IN CHIEF:**  
Dr. Janahanlal Stephen (Professor, Computer Science & Engg. Dept, Viswajyothi College of Engineering & Technology, Affiliated to KTU University, Kerala, S.India.)

**ISSN:**  
2395-5295(Online); 2395-5287(Print)

**FREQUENCY:**  
Twice Yearly

**ASSOCIATED PUBLISHER:**  
GRENZE

**RELATED SUBJECTS:**  
Computer Science & Engineering, Electrical & Electronics Engineering, Mechanical Engineering, Civil

**6. Mr. Sohan (ENG21CT0037), Mr. Likith (ENG21CT0019), Mr. Mallikarjun (ENG21CT0012), Mr. Kaviyarasu (ENG22CT1001) and Prof. Yashaswini, Assistant Professor published a research article titled “Enhanced CNN and Federated Learning Algorithm for Secure and Precise Dermatological diagnosis” in GRENZE International Journal of Engineering and Technology in Feb 20. 2025.**



*Grenze International Journal of Engineering and Technology, January Issue*

## Enhanced CNN and Federated Learning Algorithm for Secure and Precise Dermatological Diagnosis

Sohan R Vernekar<sup>1</sup>, Likith H<sup>2</sup>, Mallikarjuna R<sup>3</sup>, Kaviyarasu K<sup>4</sup> and Yashaswini B. V<sup>5</sup>  
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**Abstract—** The diagnosis of skin diseases, a prevalent global health concern, often begins with visual observation. However, the complex formations, diverse colors, and data security concerns make accurate classification challenging. This project proposes the development of an enhanced Convolutional Neural Network (CNN) model integrated with a Federated Learning approach to ensure secure and precise dermatological diagnosis. A custom image dataset encompassing five skin disease classes was created for this purpose. The CNN model was compared with various benchmark algorithms, demonstrating significant improvements in precision and recall for diseases such as acne, eczema, psoriasis, melanoma, and lichen planus. Federated Learning was employed to address data privacy issues by distributing data across multiple clients while collaboratively updating a central model. The results show that the integration of CNN-based classification with Federated Learning not only enhances accuracy but also prioritizes data security, making it a promising approach for advancing skin disease detection.

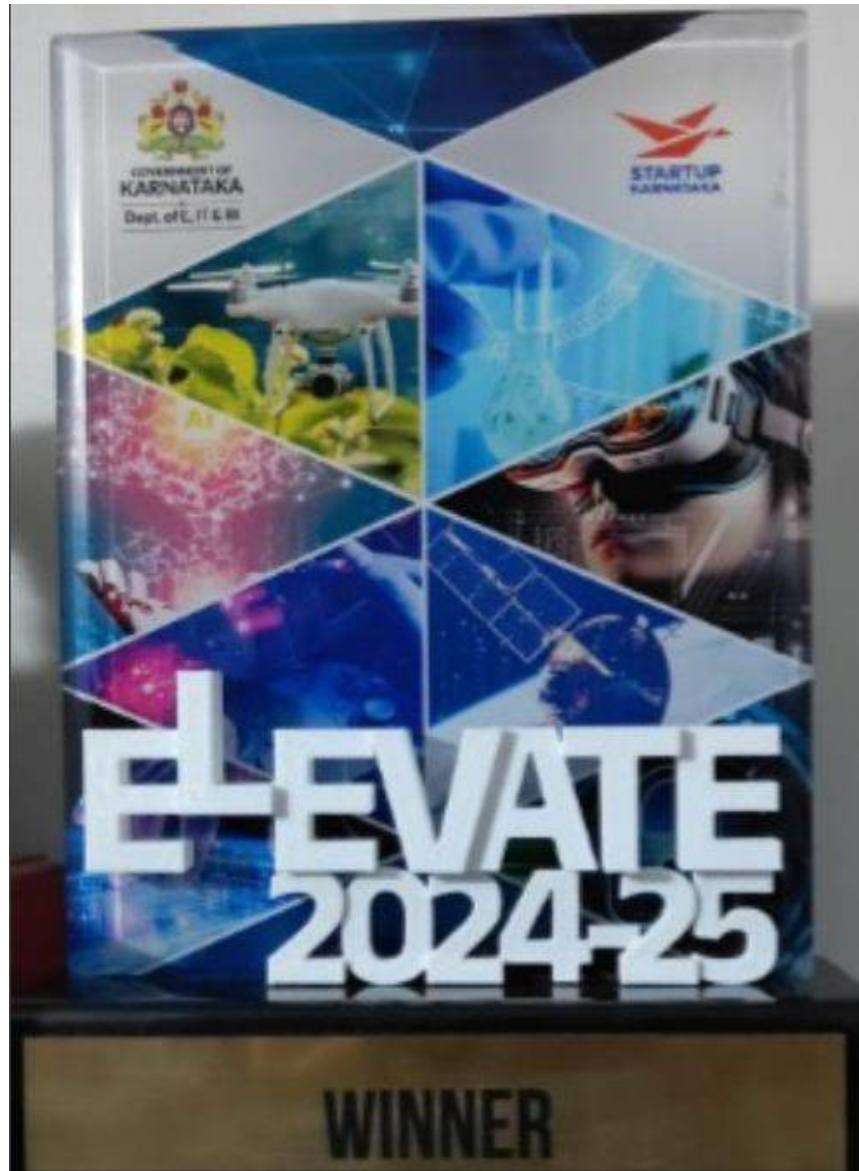


7. **Mr. Ankit Singh (ENG21CT0004) and Prof. Ramandeep Kaur, Assistant Professor** published a research article titled **“Enhancing Trust and Performance in AI-Driven Healthcare: A Comprehensive Review of Explainable AI Features”** in Fourteenth International Conference on **Control System and Power Electronics – CSPE 2025** in Feb 27-28, 2025.



### **CST Students Triumph at Karnataka Elevate 2024-25**

The Department of CST proudly congratulates our student team—Mr. Allan, Ms. Swathi, Mr. Shashank, Ms. Saara (8th semester), Ms. Pranathi, Mr. Ripple, Ms. Ashritha (6th semester), and Ms. Yashaswini (4th semester)—guided by **Dr. Santosh Kumar J and Dr. Sudha D**, for winning **Karnataka Elevate 2024-25** with the support of **Dr. Shahina Parveen (Chairperson, CST), Dr. Udaya Kumar Reddy (Dean), SoE, DSU**.















**NSS Activity on TB Awareness Program at Jakkasandra Village**













8. **Mr. Ankit Singh (ENG21CT0004), Mr. Aman (ENG21CT0003), Mr. Khan Samin (ENG21CT0013), Mr. Ashraf (ENG21CT0025), Prof. Junaid, Assistant Professor and Dr. Sudha, Associate Professor** published a research article titled **“Cloud-Based Blood Banking with Real-Time Donor Tracking Using Machine Learning”** in International Conference on Intelligent Systems and Digital Transformation 2025 (ICISD'25), SRM Institute of Science and Technology Vadapalani Campus, Chennai, Tamil Nadu, 5th - 6th May 2025.



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Ankit Singh

OF COLLEGE Dayananda Sagar University

HAS PARTICIPATED AND PRESENTED THE PAPER TITLED ON  
**CLOUD-BASED BLOOD BANKING WITH REAL-TIME DONOR TRACKING USING  
MACHINE LEARNING**

in the International Conference on Intelligent System and Digital Transformation (ICISD'25),  
organized by the Department of Computer Science and Engineering, SRM Institute of Science  
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