

**Department of Computer Science and Engineering**

# **Capstone Mela 2025**

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## Department of Computer Science and Engineering

### Panel 1:

Team ID	Project Title
6	Cost Estimation for Aerospace Manufacturing using Machine Learning Models
7	Localisation of deep faked facial images through u-net architecture
28	CrowdTrust: Evaluating the integrity of Campaigns on Donation based crowdfunding platforms
32	Capstone Management System
54	Sketchterior: Abstract Sketches to Photorealistic Interior Design Images using StyleGAN2
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61	Indexing and Summarization of Sports Videos using Multi-Modal Approach
83	Path-Finder: Reinforcement learning based. Optimal road construction and connectivity system.
106	AUTOMATED MATH GRADING AND ASSISTANCE : A MACHINE LEARNING APPROACH
111	DEEPFAKE PREVENTION USING DEEP LEARNING
124	Emotive Audio Synthesis: Crafting Resonance in Sign Language Expression through Sentiment Analysis and Facial Recognition
133	Underwater Dynamic Path Planning and Obstacle Avoidance of an AUV with Variable Velocity Ocean Currents
141	Acne Detection and Product Recommendation
142	MULTI-OBJECT TRACKING AND ANALYTICS IN SURVEILLANCE FOOTAGE

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### **Panel 2 :**

Team ID	Project Title
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12	Multilingual Crime Phrase Identification: Translating and Analyzing across Languages
13	AI Driven Personalized Career Pathway Generation and Guidance System with Conversational AI Agents
22	SentientHerd: Multimodal AI Framework for Behavioral and Emotional Analysis Using Vision, Audio Detection, and Language Models
29	Journey Craft - Crafting Your Perfect Journey
30	Holistic Research Quality Index using Large Language Models
40	Detecting Anomalous Self-Citations using Citation Network Analysis and LLMs
50	Reimagining the Voice of the Game: Exploring Artificial Intelligence for Sports Commentary
62	STRESS PROFILING THROUGH MULTIMODAL FUSION
71	Stock Portfolio Risk Analysis Using Multimodal Data
75	PATENTRAC : Empowering Innovation with Comprehensive Patent Solutions
93	Unveiling Health Dynamics Of India
95	Enhancing Aviation Safety through Predictive Alerts on Migratory Bird Strikes
117	GlobalLearn: Bridging Gaps through Multilingual Education Texts App
131	FROM TEXTUAL THREADS TO DIMENSIONAL FACES
134	Optimising Aerodynamics of Car using Dynamic Flow Lines Adaptation

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### Panel 3:

Team ID	Project Title
9	AI based Parkinson disease Detection and Assessment: Integrating evaluation for enhanced diagnosis
15	SMARTSCAPE : AI POWERED SUSTAINABLE URBAN PLANNING
25	Comic Strip Social Narratives For Autistic Individuals Using Gen AI and Stable Diffusion
33	Emotion-Aware Subtitle Generation
37	TalkAudit: Automated Product Feedback Analysis
65	LLM DRIVEN DEEP LEARNING COGNITIVE SUPPORT FOR STUDENTS: A DYNAMIC, TAILORED APPROACH FOCUSED ON DEPRESSION INTENSITY
69	Object Recognition for Automated Billing in a Shopping Mart
79	Advancing Neuroimaging Analysis with 3D Brain Parcellation and Alzheimer's Detection
87	Real Time Thought Driven Scene (Image) Creation: An fMRI Based Approach
88	Real-Time Speech Generation of Regional Languages using Indian Sign Language
91	INDIC LLM FOR INSURANCE APPLICATIONS
99	EcoDefender: Autonomous Pest Management Rover with Laser Technology
112	Real time speech to text converter and communication coach for low resource language (Hindi) : Sanchar shuddhi
122	Agglomerated Dataset Creation to Improve Traffic Forecasting
149	DistillWatch: AI-Enhanced Examination Monitoring Powered by Dual Knowledge Distillation and GAN's Frameworks

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### Panel 4:

Team ID	Project Title
1	Building Secure And Decentralized Survey Platform: A Comprehensive Solution With FIDO2 Authentication And Fluree
5	FedShield: Privacy Preservation for Blockchain enabled Federated Learning with Homomorphic Encryption and Zero-Knowledge Proof
10	A Novel Hybrid Model that Generates Passwords
11	DYNAMIC THREAT DETECTION AND MITIGATION USING AI-INFUSED FIREWALLS
27	PryGuard Browser: Enhancing Online Privacy and Security
36	Detection and Prediction of Zero-day Attacks in the Healthcare Sector
57	Vulnerability Detection and Repair in Source Code
80	Generative and Adaptive SSH Honeypot using Reinforcement Learning and Large Language Models
82	Detection of DDoS attack using blockchain
94	Intelligent Honeypot for Web Applications: Leveraging Seq2Seq and RL for adaptive attacker interaction
101	Human Resources Blockchain Intelligence Recommendation System (HRBIRS)
121	Securing Healthcare Record Using Blockchain Technology
123	Detection and Preventive Intervention in schizophrenia
127	ENHANCED PATIENT CENTRIC DRUG TRACEABILITY CHAIN: BLOCKCHAIN-BASED INTEGRATION OF DRUG SUPPLY CHAIN WITH PATIENT DRUG RECORDS
143	Plant leaf Disease Detection using Deep learning in Tomato,Potato and Chilli
152	Dine Ease

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### **Panel 5:**

Team ID	Project Title
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8	Plant Disease Detection using Image Processing and GAN
9	SmartCart
19	Personalised Oratory Coach
44	Remote Diagnosis and Monitoring of Lung Disease
47	A Comprehensive Analysis and Sustainable Planning Framework for Rapidly Evolving Urban Centers
48	Automated Data Pre-Processing Tool using Self-Supervised Learning
52	Automating Court Judgement Prediction and Explanation in Indian Legal Cases
55	Detecting Plagiarism in Music Clips using Audio Signature Matching
56	Autonomic Micro-Service Mesh using Machine Learning Models
89	Finsemble: A Unified Framework for Stock Analysis, Sector-specific recommendations and Forecasting
109	Sentimental Analysis of Corporate Reviews Using Machine Learning Models
113	Decoding Real-Time Violence: Identifying Patterns using XAI Analysis
125	Consistent Access to Cloud Services across Regions for Large Enterprises
129	Real-Time Drone Recognition & Classification using Zero-Shot Learning for No-Fly-Zones
140	Transforming Customer Engagement through Curated Ad Creatives
148	CLOUD AGGREGATOR WITH DISASTER RECOVERY

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### **Panel 6:**

Team ID	Project Title
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20	Plant Species Identification using Vision Transformers
34	TRAFFIX: DYNAMIC SCHEDULING OF TRAFFIC SIGNALS USING MACHINE LEARNING
38	AI enabled Threat Detection using DIDS for detecting data breaches
49	Super resolution and terrain analysis for autonomous mapping of lunar landing sited
70	THREADS IN THE MATRIX: REVOLUTIONIZING FASHION WITH OFFLINE VIRTUAL FITTING ROOM
86	Analysis of Acoustic Patterns in Infant Vocalizations using Internet of Things and Machine Learning
98	Graph Based Malware Analysis API
102	BioBit: AI Secured Supply Chain Management and Drug Authentication through Blockchain
103	REAL TIME CHILD ABDUCTION DETECTION AND ALERT SYSTEM
104	Autonomous medical delivery drone
105	PHISHNET: Threat Intelligence System for Phishing Attacks using Machine Learning
132	Efficient Dynamic Transitive Closure Based Indexing for Google Zanzibar-Like Systems
136	Genomic annotation using Large Language Models augmented Knowledge graphs
144	DECOMPOSED FACE DETECTION AND RECOGNITION USING GAN
145	VULNERABILITY DETECTION IN BLOCKCHAIN SMART CONTRACTS THROUGH MACHINE LEARNING

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### Panel 7:

Team ID	Project Title
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23	HybridTimeNet: A Novel Approach to Proactive Load Forecasting in a Cloud Environment
42	Multi modal deception detection using verbal and micro expression analysis project 42
46	An approach to optimize task offloading and scheduling in fog computing
58	Smart Parking System using IoT and Wireless Sensor Network Technology
67	Mental Health Partner
76	Risk Analysis using Monte Carlo Simulation and Causal Inference in Stock Market
81	Road Incident Detection System
84	Implementation and analysis of a reverse image lookup system for efficient fashion image classification and visual search
96	Long term Stability testing and Shelf-life prediction of Pharmaceutical drug (Clarithromycin)
100	Interactive English Mastery
107	Potential Fishing Zone Forecasting using Satellite Imagery
130	Swar:Your Rhythm, Your Reward, Where Every Note Counts
137	EFFICIENT PROXIMITY DETECTION SAFETY SYSTEM
138	Ocular Insights Automated Detection of Underlying Diseases through Eye Imaging Analysis
151	SIMPLIFIED PARKING & MALL NAVIGATION



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### **Panel 8:**

Team ID	Project Title
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35	Psychological Modelling and Action Recognition for Boxing
39	Enhancing Football Player Recruitment: A Holistic Football Player Acquisition Metric
43	Development of an Integrated Healthcare Resource Management System for Efficient Emergency Response
64	Enhancing Women's Redressal System
66	Towards Safer Social Media : Real-Time Euphemism and Toxicity Detection in Online User Interactions
72	Accessible Legal Assistance through NLP: Summarisation And Recommendation of Indian Legal Documentation with Kannada Translation
74	Optimizing Home Environment Safety' (IoT- Based Freon Gas Detection and Automation Update)
78	Beyond the Bat
92	Hybrid Crime Data-driven Route Optimization System for Safer Urban Navigation
115	Pulmonary Health Surveillance through Chest Radiography
118	Multi-Lingual hate speech detection using Meta-Learning
139	Art Restoration Using Deep Neural Networks
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155	Spamshield sentiment analysis

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### **Panel 9:**

Team ID	Project Title
3	Integrated Case Analysis and Contract Review Platform
17	GAN-Driven Data Resilience for Engine Monitoring
18	Using Augmented Dynamic Learning to Address the Generalizability Challenge in Deepfake Detection
31	Supply Chain Logistics of Perishable Food Using Machine Learning Techniques and Sustainable Practices
41	ANIMATRIX - Personalized Multimodal Content Generation for Advertising
45	Decode Success with ML in Startup Prediction
51	Suspicious Activity Detector for Retail Stores
53	AutoTest - Automated MCQ Generation for Exam Preparation using AI agents
60	ECHOVISION : An AI-Powered Smart Glasses for the Visually Impaired
73	Decentralized-Blocks: Federated Neuroimaging Framework with Dense Transition for Alzheimer's Disease Detection
85	Advancing Early Detection of Suicidal Thoughts through Multi-Modal Analysis
90	Optimised Crowd Estimation through Hybrid Methodologies and Enhanced Pre-Processing Techniques
116	Beyond the surface: An ML approach for Navigating Aquatic Artistry
150	Kannada QA:empowering decisions through Pill Identification
154	Proactive violence detection using ML

## **Department of Computer Science and Engineering**

### **Panel 10:**

Team ID	Project Title
14	SDN-Based Network Monitoring for Real-Time Metrics and Network Adjustments with Big Data Technologies
26	FROM DIAGRAMS TO CODE: A RESEARCH EXPLORATION INTO AUTOMATED & ROBUST CLOUD TEMPLATE CREATION
63	Strategic IIoT Security: Designing An Anomaly Detection Technique for Improved Threat Detection in Aquaculture
68	Moving Past Docker for Serverless on the Edge: WebAssembly Outside the Web
77	Adaptive Path Planning for Autonomous Vehicles in Adverse Driving Conditions and Aggressive Scenarios: A TD3-Based Approach
97	Career and Credential Validation: Harnessing the Power of Blockchain and Machine Learning for Authenticity and Trust
108	Leveraging Graph Digital Twin for Fault Detection and Improved Power Grid Stability in Smart Cities
110	Securing Biometric Data using Baremetal Hypervisor
114	Threat detection in DarkWeb using ML Techniques
119	Continuous Course Attainment and Skill Alignment: Fostering a Synergistic Ecosystem for Academic and Industrial Domains
120	Simulation of Cybersecurity Attacks and Detection using Machine Learning Techniques with VLAN Integration
126	A novel method for video manipulation and compilation using Big Data Technologies
128	HealthTracker : An AI-Enabled Body Area Network for Enhanced Health Monitoring
135	Smart Agriculture and Next-Gen Sustainability: Big Data, ML, and Blockchain for Carbon Sequestration Prediction and Carbon Credit Trading
147	Wardrobe Wizard: AI-Enhanced outfit recommendation system