CONFERENCE PROCEEDINGS

2ND INTERNATIONAL CONFERENCE ON GLOBAL TRENDS IN ENGINEERING AND TECHNOLOGICAL ADVANCEMENT (2ND ICGTETA'25)

2ND ICGTETA 2025

OCTOBER 25TH 2025

ASSOCIATE PARTNER

VIPS.Tech
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CHAIRMAN'S MESSAGE

DR. NATARAJAN G

I am delighted to announce that all departments have collaboratively organized the "2nd International Conference on Global Trends in Engineering and Technological Advancement (2nd ICGTETA'25)" and have successfully published its proceedings.

This joint effort reflects the dedication, hard work, and enthusiasm of our faculty and students. Initiatives like this not only promote academic excellence but also inspire innovation and research across various disciplines. I sincerely thank all Heads of Departments and staff members for their steadfast support. A special note of appreciation goes to the Editorial Board for their significant contributions in making this conference a remarkable success. Congratulations to everyone involved!

CHAIRPERSON'S MESSAGE

MRS. BRINDHA NATARAJAN

I am delighted to extend my congratulations to the faculty and students of all departments who have demonstrated remarkable interest and shared their valuable knowledge in organizing the "2nd International Conference on Global Trends in Engineering and Technological Advancement (2nd ICGTETA'25)".

Their enthusiasm, dedication, and boundless energy have been instrumental in making this conference a success. I am confident that their diligent efforts, meticulous planning, and sincere execution will lead to highly rewarding outcomes. My heartfelt best wishes go to all the committee members and participants of 2nd ICGTETA'25. I truly appreciate the dedicated efforts of our faculty and students who have made this event possible.

VICE-CHAIRMAN'S MESSAGE

MR. VISWANATHAN N

It is a great pleasure to witness the successful conduct of the "2nd International Conference on Global Trends in Engineering and Technological Advancement (2nd ICGTETA'25)" organized by Gojan School of Business and Technology. Events like these showcase our institution's unwavering commitment.

To academic excellence and to nurturing a research-oriented mindset among students and faculty alike. At Gojan, we firmly believe that true learning emerges when knowledge is applied in real-world contexts. Our college emphasizes innovation, hands-on experience, and collaborative growth. This conference provides a valuable platform for participants to explore emerging trends, present their research, and engage with evolving technologies. I extend my heartfelt congratulations to the organizing team and all contributors for their dedicated efforts. Best wishes for a successful 2nd ICGTETA'25.

PRINCIPAL'S MESSAGE

DR. SELVAKUMAR C

On behalf of Gojan School of Business and Technology, I extend a warm welcome to all delegates, faculty members, research scholars, and student participants attending the "2nd International Conference on Global Trends in Engineering and Technological Advancement (2nd ICGTETA'25)".

At GSBT, we are devoted to academic excellence and nurturing a dynamic learning environment that encourages exploration, innovation, and collaboration. This conference stands as a testament to our commitment to research and knowledge dissemination. As technology continues to advance, our management actively embraces emerging trends to stay at the forefront. 2nd ICGTETA'25 serves as a vital platform for exchanging ideas and presenting innovations. We express our sincere gratitude to our management, faculty, organizing team, and students for their steadfast efforts and invaluable support.

ACADEMIC AFFAIR'S MESSAGE

DR. ARUNSANKAR G

I am proud to share that our college is hosting the "2nd International Conference on Global Trends in Engineering and Technological Advancement (2nd ICGTETA'25)". This conference brings together students, researchers, and academicians to exchange innovative ideas on emerging trends and advancements.

In today's fast-paced world, where opportunities in engineering and technology are rapidly growing, events like 2nd ICGTETA'25 play a vital role in enhancing skill sets. Participating in such platforms sharpens technical knowledge, critical thinking, and research abilities—key traits for success in the modern engineering field. We are confident that 2nd ICGTETA'25 will foster collaboration, learning, and professional development.

STUDENT AFFAIR'S MESSAGE

MR. RAMADHURAI R

Our institution has always pursued the mission of achieving the impossible, and with the dynamic team at Gojan, failure is never an option. The central theme of 2nd ICGTETA'25 emphasizes interdisciplinary challenges requiring innovative and diverse perspectives.

I strongly believe this multidisciplinary conference will offer participants a transformative experience—enhancing their knowledge and broadening their outlook to address complex societal issues. This year, we are proud to have received an impressive number of high-quality papers from reputed institutions, reflecting the increasing interest in this conference. I extend my sincere gratitude to our Management and Principal for their constant support. May this platform continue to inspire innovation and foster collaboration.

CONFERENCE CHAIR'S MESSAGE

DR. NAFEEZ AHMED L

Engineering technologies play a pivotal role in driving modern innovations, advancing applied sciences, and enhancing automation. Their ongoing development continues to reshape our world, delivering cutting-edge solutions and promoting a more efficient and sustainable global ecosystem.

2nd ICGTETA'25 has been thoughtfully crafted as a platform for students, researchers, academicians, and industry experts to share technical knowledge, research outcomes, and collaborative strategies across various engineering fields. I extend my heartfelt thanks to our Honorable Chairman, Dr. G. Natarajan, and Respected Chairperson, Mrs. Brindha Natarajan, for their visionary leadership and unwavering support in bringing this conference to fruition. Thank you all for your active participation and valuable contributions, making 2nd ICGTETA'25 a significant academic achievement.

TABLE OF CONTENTS

9	ICGTETA-009	Face Recognition- Driven Student Attendance Monitoring & Course Dashboard Application	Ajay G Vincent, Jashwanth Kanna, Thilakavathy P	Vels Institute Of Science, Technology & Advanced Studies (VISTAS)	9
10	ICGTETA-010	QR Code Malicious URL Detection System Using Machine Learning	M Rakshitha, A M Ponmadhu, K Priyanka, S Lochana, G Revathy	Vels Institute Of Science, Technology & Advanced Studies (VISTAS)	10
11	ICGTETA-011	Real-Time Monitoring Of Driver Drowsiness And Distraction Detection	Sarvesh S, Deepak D, Revathy G	Vels Institute Of Science, Technology & Advanced Studies (VISTAS)	11
12	ICGTETA-012	Smart Adaptive Traffic Signal With Emergency And Pedestrian Priority	Prabavathi S, Ponmathi M, Nisha K, Divya B	Vels Institute Of Science, Technology & Advanced Studies (VISTAS)	12
13	ICGTETA-013	Covert Channel Communication And Detection In ICMP Protocol	Radhika S, Saktheeswari R	Sri Venkateswara College Of Engineering	13
14	ICGTETA-014	Fortilock (Integrating Public Key Encryption With OTP Based MFA For Robust Security)	Saravana Nageswar B, Priyadarshni S, Dr. S. Aarthi	Meenakshi Sundararajan Engineering College	14
15	ICGTETA-015	Survey Of Explainable Machine Learning For Suicidal Ideation Detection: From Patient Text To Clinician Trust	Leckhasri C, Prathiyuksha J, Danalakshmidevi G, Sagana K, Lakshmi P	Sri Manakula Vinayagar Engineering College	15
16	ICGTETA-016	Smart Self- Checkout Cart Using IoT Based Scanner	Swetha M, Snow Varshini V, F Benasir Begam	VELS Institute Of Science, Technology And Advanced Studies	16
17	ICGTETA-017	Grabez – A Visual Flow-Based Builder For Intelligent Systems And Learning Pipelines	Jabez G Aldrin, Gokul V, Mohana Priya P	VELS Institute Of Science, Technology And Advanced Studies	17

18	ICGTETA-018	Healing In Flight: Vein-Like Systems For Aircraft Structural Integrity	V Aashiha Rai, P Jayapriya, Amanda Mary J	Gojan School Of Business And Technology	18
19	ICGTETA-019	AI-Based Detection Of Voice Deepfakes Using Spectrogram Analysis And Deep Learning Models	Nithya S S, Kumaraguru P, Pandeeswaran B	Meenakshi Sundararajan Engineering College	19
20	ICGTETA-020	Animated AI Teacher: An Intelligent Avatar-Based Pedagogical Framework For Remote And Hybrid Learning	Veebika V S, Tanvi B, Saidharan Y	Meenakshi Sundararajan Engineering College	20
21	ICGTETA-021	Cloud Integrated IoT Traffic Data Streaming System	Javed N, Dhanush Raj R, Hemanth Raj P, Jayashree K M	Jerusalem College Of Engineering, Chennai	21
22	ICGTETA-022	Intelligent PPE Detection And Compliance Assurance At Construction Sites Using Improved YOLO Algorithm	Santhosh Kumar, Senthamil selvi	Saranathan College Of Engineering	22
23	ICGTETA-023	Leveraging Deep Learning For Predictive Modeling In Clinical Research And Pharmaceutical Discovery	Vijay B S, Rahul B S, Yogitha N	Meenakshi Sundararajan Engineering College	23
24	ICGTETA-024	Analysis Of Emotion Detection Based On EEG Signal: Techniques, Framework, And Perspectives On Arousal And Valence Dimensions	Kasthuri Devarajan, Dr. Suresh Ponnan	Vel Tech Rangarajan Dr Sagunthala R & D Institute Of Science And Technology	24
25	ICGTETA-025	Design and Fabrication Of A Hybrid Savonius- Darrieus Vertical Axis Wind Turbine For Efficient Low Speed Wind Energy Harvesting	M P V Ponmudi Chezhiyan, Abiniya R, Manigandan S	Sathyabama Institute of Science And Technology	25
26	ICGTETA-026	Aircraft Vibration And Fatigue Monitoring System	Praveen K S J, Gowtham I, Anand T	Sathyabama Institute of Science And Technology	26

27	ICGTETA-027	Agriculture Portal: ML & API Solutions For Farmers	Sinivasan S, Manojkumar G, Santhosh D M, Ram Prasath S	Kamaraj College of Engineering And Technology	27
28	ICGTETA-028	Cybersecurity Enhancement Using Honeypots As A Deceptive Defense Mechanism	Kapilan V, Balajee K, Ganesan G, Kumaravel R	Kamaraj College of Engineering And Technology	28
29	ICGTETA-029	Smart Solar Powered Water Purification And Distribution System In Remote Areas	IndhuSadasivam, Harani.N, Brindha .S	M kumarasamy college of engineering	29
30	ICGTETA-030	Design And Implementation Of Solar Powered IoT Integrated Dewatering System For Mining Operation	Akhilesh R, Abdul Jameel A, Sharvesh S, Sollamuthan K M	M Kumarasamy College of Engineering	30
31	ICGTETA-031	Digital Code Lock With Alarm, Reset - Pin And Indicators	Adithiya S. G	M. Kumaraswamy college of engineering	31
32	ICGTETA-032	IoT-Enabled Segregation System For Low- And High Toxic Particulate Matter And Monitoring	Harivasanth A, Karthic S, Balamurugan S, Elamurugan M	M Kumarasamy College of Engineering	32
33	ICGTETA-033	Design And Implementation Of An IoT-Enabled Solar Tracking System With Environmental Sustainability And Voltage Monitoring	Abarna S, Gobika M, Iswarya P, Monigashree S, Sathishkumar S	M Kumarasamy College of Engineering	33
34	ICGTETA-034	AI Enhanced State Of Charge With Weather Integration	Nigitha C, Dhivya M, Thirunayani R K, Dinesh Kumar S	M Kumarasamy College Of Engineering	34
35	ICGTETA-035	IoT Enabled Paper Waste to Electricity Generation IntegratedWith Solar System	Deepini M, Harini M, Karnika D, Banumathi S	M Kumarasamy College Of Engineering	35

36	ICGTETA-036	AI-Driven Multi-Hazard Prediction And Decision Support System For Flood And Fire Management	K Abhirami, J Lavanya	Kings College Of Engineering	37
37	ICGTETA-037	Blockchain-Enabled Multi-Layered Product Authentication Against Counterfeit Products	Dr. S M Uma, D Parkavi	Kings College Of Engineering	38
38	ICGTETA-038	Design And Development Of A Smart Rehabilitation Wheelchair With Integrated Physiotherapy And Path Navigation	Dhanyasri T, Madhumitha P, Bhuvaneshwaran M, Sharmiladevi B	M. Kumarasamy College Of Engineering	38
39	ICGTETA-039	Smart Human Computer Interaction Framework For Industrial Cognitive Assessment	Vimalanathan K, Satheesh Rajendran	Muruganandam College Of Engineering, Guindy	39
40	ICGTETA-040	AI Powered Resume Screening System	Dhanush K, Dharukhandh G, Thilakavathy	Vels Institute Of Science, Technology And Advanced Studies	40
41	ICGTETA-041	Voiceguard: Enhancing Deepfake Audio Detection Using Spectral Fusion	Murali Vinod P, Guru Gokul	Sri Venkateswara College Of Engineering	41
42	ICGTETA-042	Utilizing IoT For Early Prevention Of Panama Disease In Banana Crop	G Kiruthika, Roshini R, Sivaranjani R, Dhanush P T	Kongunadu College Of Engineering And Technology	42
43	ICGTETA-043	Mumcare IoT Based Pregnancy Health Monitoring App	Sudhaa Shree K, Madhubala K, Dharshini S, Mahalakshmi P	Kamaraj College Of Engineering And Technology	43
44	ICGTETA-044	Nalamaa: AI-Based Wellness Assistant For Elders	Akshaya T, Maha Swetha N, Gopika B, Harini U, Ramya P	Kamaraj College Of Engineering And Technology	44

45	ICGTETA-045	Identification Of Spoiled Mushrooms Using AI-Based Technology	G Kiruthika, Dinesh Selvan C, Kiruthikaa R, Prakash R	Kongunadu College Of Engineering And Technology	45
46	ICGTETA-046	Smart Inhaler Monitoring System	Hemavarshini K, Sakthi Priya G, Santhiya K, Gayathri K	Kamaraj College Of Engineering And Technology	46
47	ICGTETA-047	Multimodal Deep Learning Framework For Early Detection Of Pancreatic Cancer	Pooja R, Priyajayam K, Malathi M, Saranya Priyadharshini R	Kamaraj College Of Engineering And Technology	47
48	ICGTETA-048	Zone Band - Adaptive Wearable For Safety And Supervision	Ferdine Snavia A, Reena Kiroriwal, Kalpana R	Vels Institute Of Science, Technology And Advanced Studies	48
49	ICGTETA-049	HVAC Design For College Buildings - IoT	Mohamed Ansar, Muruganantham, M P M Mohamed I, Abbas Kiyasudeen P	Mohamed Sathak Engineering College	49
50	ICGTETA-050	AI-Enabled Smart Classroom: Monitoring Mobile Phone Usage With Real- Time Alerts	Merisha A, Shivani V, G Revathy	Vels Institute Of Science, Technology & Advanced Studies	50
51	ICGTETA-051	A Smart IoT And Machine Learning Framework For Influenza Pathogen Detection	Prathiksha G, Divanshini R, R Anandan	Vels Institute Of Science, Technology & Advanced Studies	51
52	ICGTETA-052	A Machine Learning Framework For Real-Time Credit Risk Assessment And Scoring	Ashok V, Sakthi Bharathi I, Dr. G. Revathy	Vels Institute Of Science, Technology & Advanced Studies	52
53	ICGTETA-053	Brainvision: Brain Stroke Classification And Analysis With XAI	Ajai K, Anirudh A, Keerthiga M, Shenbagavalli	Jerusalem College Of Engineering	53

54	ICGTETA-054	Signsiamnet: Offline Signature Verification Using Siamese Network And ResNet18	Balasubramaniyan K, Britishyarani S, Harisri R, Divya D	Jerusalem College Of Engineering	54
55	ICGTETA-055	Comprehensive Survey On The Efficacy Of Hybrid CNN-LSTM Models For Network Intrusion Detection Systems	Rigana Fathima N, Dr. D. Murugan	Manonmaniam Sundaranar University	55
56	ICGTETA-056	A Survey Of Plant Disease Identification And Classification Using Machine Learning Models	A Saisri, Dr. D. Murugan	Manonmaniam Sundaranar University	56
57	ICGTETA-057	An Intelligent Solar-Powered Water Distribution and Purification System Employing IoT And AI	Indhu Sadasivam, Brindha S, Harani N, P Sasirekha	M. Kumarasamy College Of Engineering	57
58	ICGTETA-058	3D VoxResNet For Lung Disease Classification: An Architectural Perspective	Evangeline Dhivya T, R Balasubramanian	Manonmaniam Sundaranar University	58
59	ICGTETA-059	AI-Driven Environmental And Stress- Responsive Calming System For Zoo Animals	Sowmiya S, Sridhar R, Rajkumar B, G Revathy	Vels Institute Of Science, Technology And Advanced Studies	59
60	ICGTETA-060	Thulir: AI- Powered Smart Agriculture Platform For Crop Recommendation, Climate Alerts, And Resource Optimization	Santhosh M, Bhavna M, A Packialatha	Vels Institute Of Science, Technology And Advanced Studies	60
61	ICGTETA-061	Autonomous Cyber Defense Using AI-Driven Intrusion Detection System	Kabilan K, Rishikesh S, E Padma	Vels Institute Of Science, Technology And Advanced Studies	61
62	ICGTETA-062	Campus 361 - AI- Integrated Education Management And Career Recommendation System	Nigila P R, Ramola D, A Packialatha	Vels Institute Of Science, Technology And Advanced Studies (VISTAS)	62

Real-Time Monitoring of Driver Drowsiness and Distraction Detection

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Abstract:

Driver fatigue and distraction are major contributors to road accidents worldwide. This project presents a **real-time driver monitoring system** that employs **computer vision and machine learning** techniques to detect drowsiness and inattentiveness. The system uses **facial landmark detection** to monitor eye closure and facial orientation, leveraging the **Dlib library** for accurate face and landmark identification. Video is captured from the default camera, and the **Eye Aspect Ratio (EAR)** is calculated to determine eye status.

When the EAR falls below a threshold for a sustained duration, an **audio alert** is triggered, signaling potential fatigue. The system also detects prolonged absence of the driver's face, indicating distraction, and issues an alert. Additionally, a **Convolutional Neural Network (CNN)** is implemented for gender classification, providing contextual information about the driver. This intelligent monitoring framework enables proactive intervention, enhancing road safety by alerting drivers before fatigue or distraction leads to accidents.

The system's modular architecture allows easy integration into vehicles, providing scalable and real-time detection to improve driver safety.

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