AVIT AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY

VINAYAKA MISSION'S RESEARCH FOUNDATION
(Deemed to be University under section 3 of the UGC Act 1956)

NAAC AICTE

INSTITUTION'S INNOVATION COUNCIL

MSME HACKATHON 5.0 Internal Screening

INSTITUTION'S INNOVATION COUNCIL
(Ministry of Education Initiative)

Any one social media Url Link Facebook/Twitter/Instagram/Linkedln	https://www.facebook.com/photo?fbid=965882672331765&/set=a.561293142790722		
Program Driven by IIC Calendar Activity/ MIC Driven Activity/ Celebration Activity/Self driven activity	Self -driven activity		
Event Title	MSME Hackathon 5.0 – Internal Screening		
Resource Person	**Mr.P. Ashok Kumar ,** CEO – TECHOWN **Mr.Dhamodaran.A** Service Delivery Manager in SAP QA. TCS Chennai **Mr.Harshvardhan K V** **Associate principal , LTIMindtree** Dr.L.Prabhu , AVIT		
Academic year	2024-2025	Quarter	IV
Program Type Level 1 - Expert Talk/ Exposure Visit/ Mentoring Session (2 to 4 Hours) Level 2 – Conference / Exposure Visit / Seminar / Workshop (5 to 8 Hours) Level 3 – Bootcamp/ Competition/ Demo Day/ Exhibition / Workshop (9 to 18 Hours) Level 4 – Challenges/ Hackathon/ Tech Fest (Greater than 18 hours)	Level 3 – Competition		
Program Theme IPR & Technology Transfer / Innovation & Design Thinking / Entrepreneurship & Startup / Pre-Incubation & Incubation Management	Innovation & Design Thinking		
Start date & End Date (DD/MM/YYYY)	19/08/2025	20/08/2025	
Duration of the activity (in Mins) & Start Time & End Time	450 minutes	9:30 a.m	03:30 p.m
Participants	Faculties – 12 teams	Students -2 teams	
Mode of session (online / offline) * Online Video Url compulsory	HYBRID		

Event Organizer / Coordinator Faculty Name / Department / Designation	Dr.L.Prabhu , MSME Business Incubator, AVIT
Target Participants	Students & Faculty participation from AVIT, and external MSME sector
Outcome	Applicants may get funding support up to 15 Lakhs if their idea get selected
Benefits in terms of learning/skill/Knowledge obtained (150 letters only)	Incubatee has taken the feedback of the evaluator to refine their ideas further
Expenditure Amount, If any	Rs.5000

Theme - • Low-Carbon Footprint Solutions/Technologies

- **Stealth, Surveillance, and Cyber Defense Technologies**
- **Innovation in Adoption of Industry 4.0 & 5.0 in MSME Ecosystem**
- **Innovation for Business Upliftment and Sustainability in Coastal and Hilly Areas**
- **Smart and Resilient Supply Chains**

Details of the Ideas

S. No.	Reference No. of Incubatee	Incubatee name	Title of Idea	Key Takeaways from the Idea
1	INC25ETN120158	RAMU K Sonu Ram Radhika	Development and Installation of Onboard Waste Separation System for Municipal Corporation Vehicles	The idea *"AI-based Automated KMS – Device to Decision"* is unique as it provides a novel, cost-effective, and scalable solution for MSMEs and academia. By leveraging AI, IoT, and BOTs, it automates knowledge capture and decision-making, reduces human dependency, supports differently-abled learning, and ensures efficiency with high social and business impact.
2	INC25ETN074761	SARAVANAN M	Smart Onboard Waste Segregation System for Municipal Corporation Vehicles	The idea *"Smart Onboard Waste Segregation System for Municipal Corporation Vehicles"* is highly regarded as it addresses the pressing challenge of unsegregated municipal waste through a **cost-effective, retrofittable, and scalable solution**. By enabling real-time in-transit segregation with low-cost sensors and modular design, it reduces landfill burden, minimizes manual handling, and

				supports **Swachh Bharat Mission and Smart Cities initiatives**. With a functional prototype and strong market potential, the project offers both **high environmental impact and practical feasibility** for MSME adoption.
3	INC25ETN098044	DR.SHANMUGASUNDARAM SARAVANAN	PREDVITTAL25- PREDICTION OF VITAL SIGN PARAMETERS LIKE BLOOD PRESSURE DURING DIALYSIS.	The idea *"PREDVITTAL25 – Prediction of Vital Sign Parameters like Blood Pressure during Dialysis"* is innovative as it addresses a **critical healthcare challenge** of intradialytic hypotension through a **novel AI-driven predictive system** using optical and ultrasound sensors with ANN mapping. The solution is innovative, patent-supported, and has strong applicability in hospitals and dialysis centers. With high potential to **reduce patient mortality, improve dialysis safety, and offer scalable commercialization in the growing medical devices market**, it demonstrates both **technical novelty and strong societal impact**, making it a suitable choice for health care.
4	INC25ETN071860	SARAVANA KUMAR M	Design, Fabrication, and Evaluation of a Low-Cost Powered Trolley	The idea *"Design, Fabrication, and Evaluation of a Low-Cost Powered Trolley"* is very much required in industry as it offers a **practical, affordable, and scalable solution** for small industries, warehouses, hospitals, and campuses. By using locally available components and simple fabrication methods, it reduces manual labor, improves productivity, and enhances worker safety. With strong market potential in logistics and material handling, the innovation demonstrates **feasibility, cost-effectiveness, and social impact**, making it a suitable choice under MSME Hackathon 5.0.
5	INC25ETN074707	SANGEETHA KRISHNAMOORTHI	Smart Sense Intelligent Monitor for Engine Oil Level and Viscosity in Two-Wheelers	The idea *"Smart Sense Intelligent Monitor for Engine Oil Level and Viscosity in Two-Wheelers"* the need of the hour. This innovation effectively bridges a major gap in preventive two-wheeler maintenance by offering real-time oil quality and quantity monitoring. Its IoT-enabled, retrofit-friendly design ensures cost-effective scalability,

				improves engine life, reduces repair costs, and supports sustainability through optimized oil usage. With strong market potential across OEMs, aftermarket, and fleet operations, and backed by advanced prototype development and clear IPR strategy, the solution is both impactful and commercially viable.
6	INC25ETN093460	Padmapriya Arumugam	Smart Carbon Traps Biomass-Derived Nanocomposites for India Net-Zero Future	The idea *"Smart Carbon Traps – Biomass-Derived Nanocomposites for India's Net-Zero Future"* is a **sustainable, innovative, and scalable solution** for carbon capture and pollution control. By transforming banana waste into carbon quantum dots integrated with MOFs, the project ensures **waste valorization, low-cost production, and multifunctional applications** such as CO_2 capture, pollutant sensing, and IoT-enabled monitoring. With strong alignment to **India's Net-Zero 2070 mission, Smart Cities, and circular economy goals**, the innovation demonstrates both **high societal impact and commercialization potential**, making it a suitable choice for support under MSME Hackathon 5.0.
7	INC25ETN093505	S.Sona	Aspholt- Waste to Way Binder for Greener Infrastructure	The idea *"Aspholt: Waste to Way – Binder for Greener Infrastructure"* provides a **sustainable, cost-effective, and scalable alternative** to petroleum-based asphalt. By synergistically blending biomass-derived bio-oil with treated waste engine oil, it converts hazardous waste into a **high-performance road binder** that enhances durability, flexibility, and workability of pavements. With strong applicability in **road construction, smart cities, and rural infrastructure**, the innovation aligns with **circular economy and green infrastructure goals**, making it highly impactful and feasible for MSME adoption.
8	INC25EAP100154	N.V.S.R SANNIDH	*NIKOLA – True Wireless Air Charging Technology*	The idea *"NIKOLA – True Wireless Air Charging Technology"* is a **novel, app-controlled RF-based charging system** that eliminates the limitations of wired and contact-based charging. With a **large target**

				market of smartphone users, first-mover advantage in India, and scalability toward EVs and IoT devices, the innovation holds **strong commercial potential and technological uniqueness**, making it a high-impact solution under MSME Hackathon 5.0.
9	INC25ETN101691	P.SUBATHRA	Development of Sustainable Composite eco Bricks from Demolition Waste, Polycarbonate, and Nutmeg Powder	The idea *"Sustainable Composite Eco-Bricks from Demolition Waste, Polycarbonate, and Nutmeg Powder"* offers a **novel, eco-friendly, and cost-effective construction solution** that converts waste into value. By integrating demolition debris, recycled plastics, and bio-based nutmeg powder, the bricks achieve **high strength, thermal insulation, antimicrobial resistance, and reduced carbon footprint**. With strong potential in housing, healthcare, smart cities, and green infrastructure, the innovation aligns with **circular economy, waste-to-wealth initiatives, and SDGs**, making it highly impactful and scalable for MSME adoption.
10	INC25ETN108180	Keerthi P	Development of Solar-Integrated Hybrid Cooling Panels with Waste Oil-Derived Phase Change Materials and Machine Learning-Based Performance Prediction	The idea "Development of Solar-Integrated Hybrid Cooling Panels with Waste Oil-Derived Phase Change Materials and Machine Learning-Based Performance Prediction" introduces a unique, sustainable cooling technology by converting waste oils into bio-based PCMs, integrating them with solar thermoelectric modules and AI-based optimization. This innovation not only addresses the pressing challenge of high energy demand for cooling but also transforms hazardous waste oils into value-added materials, aligning with circular economy goals. With clear scalability, relevance to MSMEs, and strong national and global sustainability alignment, the project is both socially impactful and commercially viable
11	INC25ETN094103	Thiyagarajan Purushotham	Carbon capture for Atmanirbhar Bharat Nanotech from Agricultural waste	The idea *"Carbon Capture for Atmanirbhar Bharat"* introduces a green nanotechnology solution that converts agricultural waste into carbon quantum dot–based composites for efficient CO_2 capture. This sustainable approach reduces carbon footprint, supports multiple applications like pollution control and smart sensors, and offers low-cost scalability. With strong market relevance and IPR potential, it aligns with India's net-zero and Atmanirbhar Bharat goals.

12	INC25ETN070794	PA SURIYA	Carbon capture in urban green spaces a civil Engineering perspective	The idea *"Carbon Capture in Urban Green Spaces"* presents a sustainable civil engineering solution that integrates vertical gardens, green roofs, and bioswales with IoT and GIS-based monitoring systems. It addresses critical urban challenges such as air pollution, heat islands, and stormwater management while enabling real-time measurement of carbon capture. Scalable and adaptable for smart cities, campuses, and industrial zones, the concept strongly aligns with SDGs on sustainable cities and climate action, offering both environmental and societal impact.
13	INC25EAP079680	velpui venkat narayana	EchoSigns Let Hands Speak Louder	EchoSigns is an AI-powered mobile application that bridges the communication gap for deaf and speech-impaired individuals through real-time sign detection, voice-to-sign, and text-to-speech translation with English and Telugu support. It offers features like emergency alerts, offline access, child mode, and gamified learning, making it practical and inclusive. With strong applications in healthcare, education, public services, and workplaces, EchoSigns stands out as a socially impactful, scalable, and regionally relevant assistive technology solution.
14	INC25ETN076691	Vidya J	Transportable Container-Based Micro Factory for Wash and cosmetic products	The proposed micro factory introduces a sustainable, container-based model powered by 100% green energy with zero liquid discharge, using locally sourced herbal ingredients and biodegradable packaging. It creates employment for marginalized women and tribal communities while promoting eco-friendly WASH and cosmetic products. Scalable and replicable, the initiative aligns with ESG goals, fosters community education, and positions itself as a climate-friendly, socially impactful solution for underserved regions.


GPS Map
Tiruporur, Chengalpattu, 603104, Tamil Nadu, India
Latitude
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Longitude
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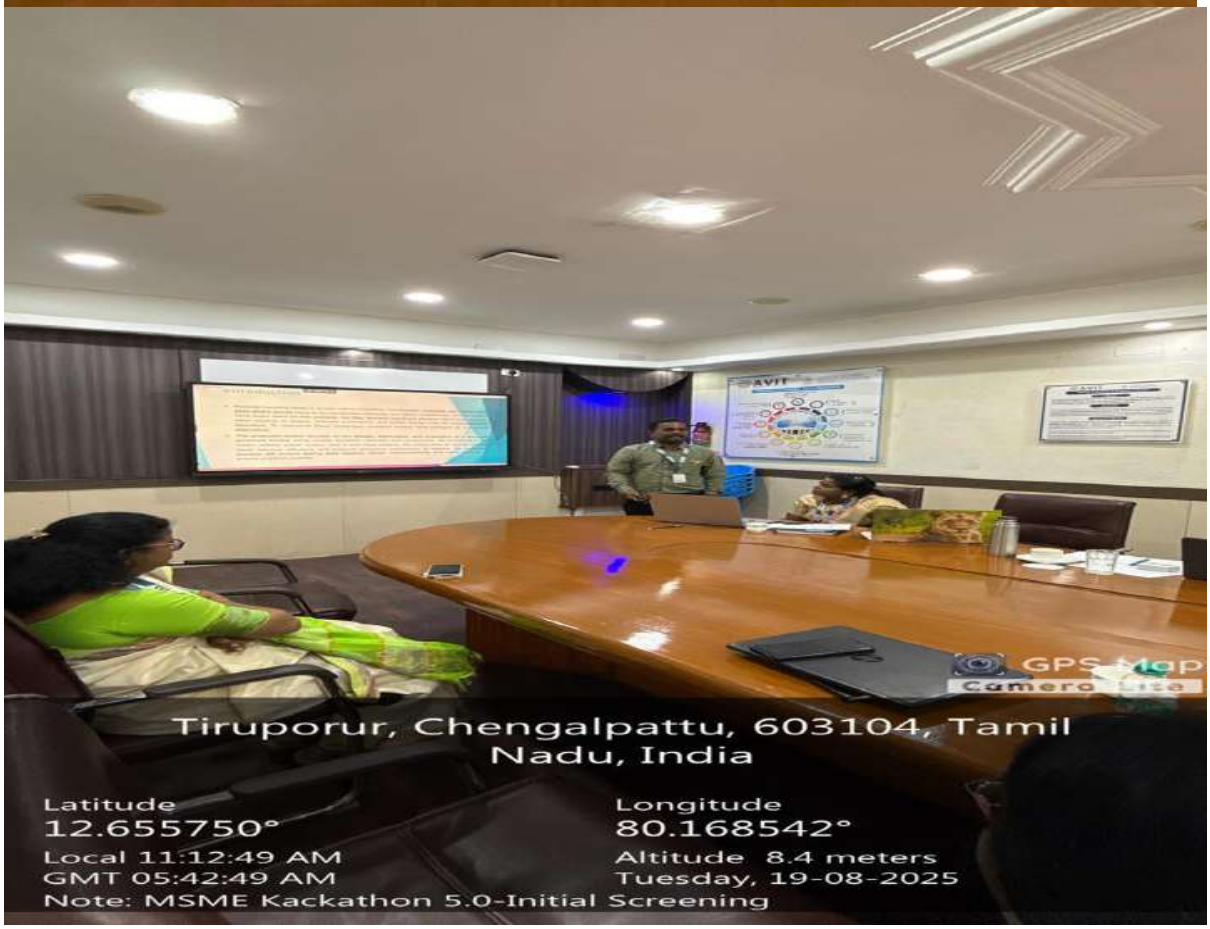
Tuesday, 19-08-2025
Note: MSME Kackathon 5.0-Initial Screening


AVIT
GPS Map
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Tuesday, 19-08-2025
Note: MSME Kackathon 5.0-Initial Screening


GPS Map
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GPS Map
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Note: MSME Kackathon 5.0-Initial Screening


GPS Map
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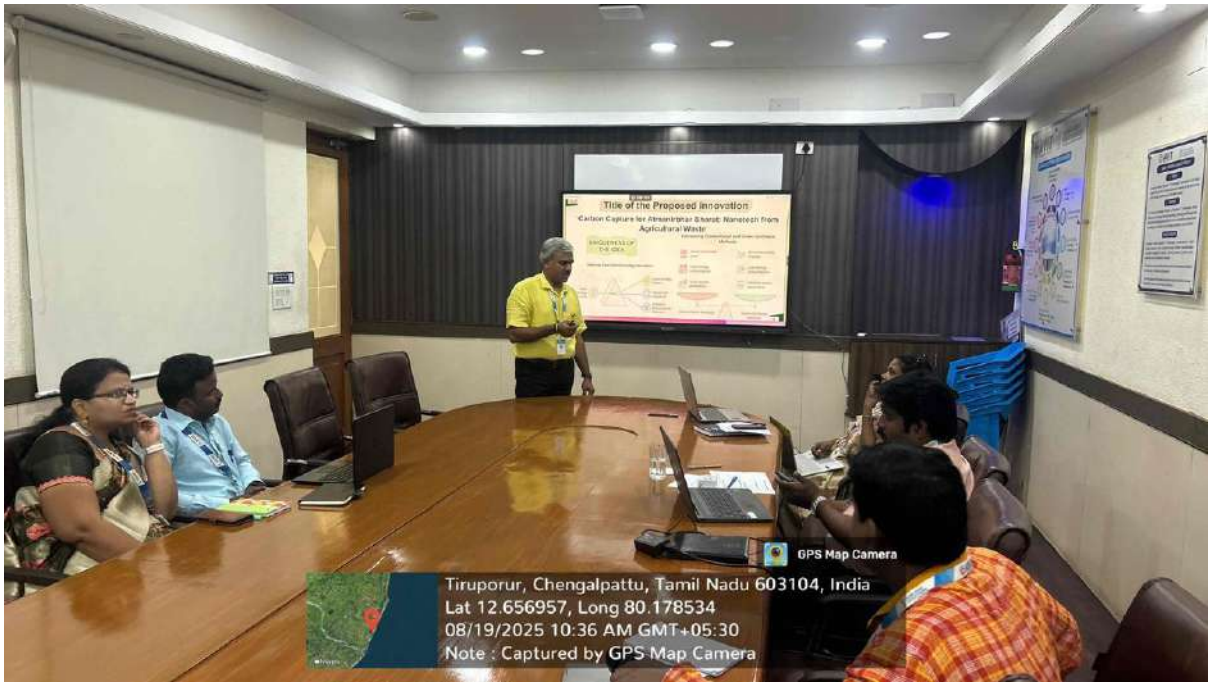
Title of the Proposed Innovation
GPS Map Camera
Tiruporur, Chengalpattu, Tamil Nadu 603104, India
Lat 12.656957, Long 80.178534
08/19/2025 10:36 AM GMT+05:30
Note : Captured by GPS Map Camera