KPR Institute of Engineering and Technology
(Autonomous)
Avinashi Road, Arasur, Coimbatore - 641 407
LEARN BEYOND

INSTITUTION'S INNOVATION COUNCIL
(Ministry of Education Initiative)

INSTITUTION'S INNOVATION COUNCIL

ANNUAL REPORT

ACADEMIC YEAR 2024-2025

INSTITUTION'S INNOVATION COUNCIL
2024 – 2025

A. ABOUT IIC

Ministry of Education (MoE), Govt. of India has established 'MoE's Innovation Cell (MIC)' to systematically foster the culture of Innovation among all Higher Education Institutions (HEIs). The primary mandate of MIC is to encourage, inspire and nurture young students by supporting them to work with new ideas and transform them into prototypes while they are informative years.

MIC has envisioned encouraging creation of 'Institution's Innovation Council (IICs) across selected HEIs. **A network of IICs** is established to promote innovation and entrepreneurship in the Institution through multitudinous modes leading to an innovation promotion ecosystem in the campuses. MIC has established Institution's Innovation Council in more than 2200 Institution's till November 2020.

Vision and Mission of IIC established at the Institute

To create a vibrant local innovation ecosystem.

Start-up supporting mechanism in HEIs.

Prepare institute for Atal Ranking of institutions on innovation achievements framework.Establish function ecosystem for scouting ideas and pre-incubation of ideas.

Develop better cognitive ability among students.

Functions of IIC

To conduct various Innovation, IPR and entrepreneurship-related activities prescribed by MIC in time bound fashion.

Identify and reward innovations and share success stories.

Organize periodic workshops/ seminars/ interactions with entrepreneurs, investors, professionals and create a mentor pool for student innovators.

Network with peers and national entrepreneurship development organizations.

Create an Institution's Innovation portal to highlight innovative projects carried out by institution's faculty and students.

Organize Hackathons, idea competition, mini-challenges etc. with the involvement of industries.

Diversified representation in the IIC established at the Institute from Industry, Interdisciplinary and Departments / Units etc.

The aim of this Centre is to achieve excellence in R&D using latest technology at the global level and produce trained professional manpower for the industry. In addition to many of the core engineering and science departments several state-of-the-art research units of the Institute carry out research under the academic umbrella of KPR.

B.Brief mention of Key functionaries at the IIC Institute

KPR- IIC -ID : IC201810247
KPR-IIC-PRESIDENT : Dr.D.SARAVANAN, PRINCIPAL, KPRIET
KPR-IIC-VICE PRESIDENT : Dr.P.SREELATHA,PROFESSOR/BME
CONVENOR : Dr.NISHA SOMS, ASSOCIATE PROFESSOR / CSE

MEMBERS

COUNCIL MEMBERS – INTERNAL

Sl.No.	Name & Details	Department	Designation	Role in IIC
1.	Dr. D. Saravanan	Principal	Professor	President
2.	Dr.P.Sreelatha	BME	Professor	Vice President
3.	Dr.Nisha Soms	CSE	AsP	Convenor, NIRF Coordinator
4.	Dr.R.Kiruba Shankar	ECE	Professor	Internship Activity Coordinator
5.	Dr.M.Kathirvelu	ECE	Professor	NIRF Coordinator
6.	Mr.D.Balaji	MECH	AP - III	IPR Activity Coordinator
7.	Dr.R.Dharmaraj	CIVIL	AsP	Startup Activity Coordinator
8.	Ms. B Vishnupriya	CSE	AP - II	Innovation Activity Coordinator
9.	Dr. Arpit Anil Panwar	MI	AP - II	Social Media Coordinator
10.	Dr. R. Senthil Kumar	MECH	AsP	Member
11.	Ms. A. Punidha	AD	AP - II	Member

12.	Mr. Biplab Das	AIML	AP – I	Member
13.	Mr. Nitis Kumar	BME	AP - I	Member
14.	Dr. S. Karunakaran	CH	AsP	Member
15.	Ms. Archita Hore	ECE	AP - III	Member
16.	Ms. M. D. Saranya	ECE	AP – I	Member
17.	S. Priyadarshini	IT	AP - III	Member
18.	Mr. N. Udhaya Kumar	MECH	AP - II	Member
19.	Dr. R. Saranya	ENGLISH	AP - III	Member
20.	Dr. P. Suriyakumar	MATHS	AP - II	Member
21.	Dr. R. Jagadeeswari	CHEMISTRY	AP - II	Member
22.	Dr. R. Subramanian@Raja	PHYSICS	AP - III	Member

COUNCIL MEMBERS – EXTERNAL

Sl.No.	Name	Email	Contact	Organization
1.	Mr.P.S.Kannan	tbi.kongu@gmail.com	994392727	TBI- Kongu Engineering College
2.	Mr.R.Ravikumar	rk@roots.co.in	9894683045	Roots Multicle
3.	Mr.D.Balaji	balaji.d@kpriet.ac.in	7338714790	KPR Institute of Engineering and Technology
4.	Mr.Ramprathap	mrprathap1027@gmail.com	9840698799	L&T
5.	Mr. Karthikeyan. S	sk@arktechautomation.co.in	9731905826	M/S-ARKTECH Automation Solutions (P) Ltd
6.	Dr. V.S.Saravanan	saravananvs@indoshellcast.com	9344411099	Indo Shell Cast Private Limited
7.	Mr. Moses Sam Paul	growthondemand@gmail.com	8870164289	GrowthOnDemand LLP

COUNCIL MEMBERS -STUDENTS

S.no	Name	Department	Mail - ID	Role	Association
1.	S. Aswin	ECE	21ec020@kpriet.ac.in	Innovation Coordinator	Innovation cell
2.	Ms.M.Archana	CHEMICAL	21ch006@kpriet.ac.in	Startup Coordinator	New gen IEDC
3.	R. R. Girithar	EEE	21ee030@kpriet.ac.in	Internship Coordinator	Design Centre/Maker's space art and Craft making design
4.	M. Muthukumaran	MECH	21me072@kpriet.ac.in	Social Media Coordinator	EDE
5.	R. Jeyasundar	CSE	21cs069@kpriet.ac.in	IPR Coordinator	Innovation & Entrepreneurship development Cell (IEDC)
6.	M. Tamilvanan	CIVIL	22ce066@kpriet.ac.in	Member	Research Park
7.	B. Hema Varshini	BME	21bm012@kpriet.ac.in	Member	Incubation and pre-incubation unit
8.	S. V. Vishal	AD	21ad061@kpriet.ac.in	Member	Innovation & Entrepreneurship development Cell (IEDC)
9.	S. Suryaprakash	AIML	22am062@kpriet.ac.in	Member	EDE
10.	P. Kavin	CSBS	22cb023@kpriet.ac.in	Member	Design Centre/Maker's space art and Craft making design
11.	P. A. Varshini	IT	22it063@kpriet.ac.in	Member	Innovation cell
12.	Ms. R. Swetha	MI	22mi057@kpriet.ac.in	Member	Incubation and pre-incubation unit

C. Portfolio / Graphical /Tabular Representation of Resource strength (Human capital and Physical Capital) of the IIC Institution

Sl.No.	Data	Volume
1	Total Number of IIC Members	61
2	Total Number of IAs	40
3	Total Number of Faculty Members from Portal	42
4	Pre-Incubation Units , if any	9
5	Incubation Units, if any	11
6	IPR & TTO Centers	2

D. Higher Facilities, Infrastructure of Pre-Incubation and Incubation kind and Student bodies / Clubs engaged in promotion of Innovation and Entrepreneurship in the campus

In the promotion of Innovation and Entrepreneurship in the campus, **Centre for Innovation Incubation and Entrepreneurship Development cell (CIIED)** is initiated. Students can utilize this cell for the purpose to establish startup, utilization of pre-incubation unit to promote innovative ideas to prototype with further evaluation by industry experts it is converted to product.

E. Highlight Achievement (Narrative / Graphical /Tabular Representation)

Sl. No.	Highlight Achievement	
1	Number and Different types of I&E and IPR activities Conducted	182
2	Number of students and faculty ideas generated	375
3	Number of student's faculty innovation / prototype developed	72
4	Number of IPs generated, published and granted	124
5	Number of Student & Faculty startup/ ventures established	11
6	Number of Copyright Registered	8
7	Number of Industrial Designs obtained	8
9	Number of Technology transfer and Commercialization happened	12
10	Amount spent on promotion and awareness generation on Innovation Entrepreneurship in the campus	Rs.4,50,000
11	Amount grant or fund supported to student & faculty lead, Innovations, startups and IPR	Rs.21,00,000

F: Highlight selected best Innovations with mention of inventor/innovation name

1. Multi-purpose Agricultural Vehicle

- This project focuses on designing and developing a cost-effective, efficient, and farmer-friendly multi-purpose agricultural vehicle.
- The vehicle is engineered to perform three essential agricultural tasks: weeding, spraying pesticides, and carrying loads, thereby reducing the need for multiple machines.
- It aims to improve productivity by minimizing manual labor, saving time, and ensuring better crop management.
- The design emphasizes adaptability, with interchangeable attachments for different operations, making it suitable for small and medium-scale farmers.

Product Done by:

B.E. Mechatronics Engineering students:

1. Swetha R
2. Bhuvaneswar S
3. Akhil V
4. Harrini A
5. Javinda ARK

Guided by:

Dr. Arpit Anil Panwar, AP/ MI

2. Agro NPK-Smart Leaf Analyzer

- This project focuses on developing a smart device capable of analyzing leaf samples to determine the levels of essential nutrients — Nitrogen (N), Phosphorus (P), and Potassium (K).
- The analyzer will assist farmers in assessing plant health and nutrient deficiencies quickly and accurately, enabling better crop management.
- By using non-destructive sensing techniques and IoT-based data collection, the system will provide real-time results and actionable recommendations.
- The device will help optimize the use of fertilizers, thereby reducing costs, preventing overuse, and promoting sustainable agriculture.

Product Done by:

B.E. Chemical Engineering students:

1. Harsha Vardhini G
2. Ashlin Roshma R
3. Dineshkanna E
4. Yaswanthraj R
5. Prashitha V S

Guided by:

Dr.A.K.Priya Prof./CE

3. Modern Bioreactor for Sustainable Biofertilizer production

- This project focuses on the design and development of a modern bioreactor to produce eco-friendly and cost-effective biofertilizers at scale.
- Emphasis will be placed on sustainability, reducing reliance on chemical fertilizers, and promoting organic farming practices.
- Advanced features such as automated monitoring of pH, temperature, aeration, and nutrient supply will ensure consistent and high-quality biofertilizer production.
- The system will be designed to optimize scalability, energy efficiency, and cost-effectiveness, making it suitable for both small-scale and industrial-level applications. T

Product Done by:

B.E. Chemical Engineering students:

1. Nandha Gopal N
2. Rohit Kumar S
3. Tivith C
4. Tharanya D
5. Catherine C Benny

Guided by:

Dr.S.Karunakaran / ASP / CH

4. RescueX – Autonomous Disaster Management System

- Provides early disaster alerts by notifying users and control centers with instant messages.
- Employs beam detectors for rapid fire identification and response.
- Integrates Geographic Information System (GIS) for real-time monitoring of environmental conditions.
- Utilizes Bayesian Networks to pre-plan resources based on predictive modeling.
- using thermal cameras and YOLOv8-based object detection.
- Incorporates LiDAR sensors to analyze and map complex terrains.
- Applies an Iterative Monitoring algorithm to observe, inspect, and track changes in affected sites.
- Uses Risk Assessment models to prioritize rescue efforts based on severity.
- Implements A* algorithm for efficient navigation and route planning.

Product Done by:

B.Tech. Computer Science and Business Systems students:

1. Salih Azeem S
2. Praemjith R
3. Syed Peer Mohammed N

Guided by:

Mr. M.Kishore Kumar , AP/CSBS

5. Neuro Glow : Coordination Therapy for ASD and stroke patients Rehab

- This project focuses on developing an innovative therapy system that enhances motor coordination and cognitive rehabilitation for individuals with Autism Spectrum Disorder (ASD) and stroke patients.
- Incorporates interactive exercises and gamified tasks designed to improve balance, movement accuracy, and hand-eye coordination.
- Uses sensors and motion-tracking technology to monitor patient performance in real time.
- Provides personalized therapy plans based on patient progress, ensuring adaptive rehabilitation.
- Aims to increase engagement and motivation through immersive feedback mechanisms like lights, visuals, and interactive cues.

Product Done by:

B.E. Biomedical Engineering students:

1. Bishnu Thakur
2. Rohit Sah
3. Saurav Kafle
4. Uma Shaker Muraw
5. Eshan Goyal

Guided by:

Ms. Kanimozhi, AP/BME

6. Atmosphere Water Generator: A Sustainable Solution for Water Scarcity

- This project focuses on developing an Atmospheric Water Generator (AWG) that extracts moisture from the air and converts it into clean drinking water.
- Employs a multi-stage filtration and sterilization process to deliver safe, high-quality drinking water.
- Aims to optimize energy efficiency through advanced cooling techniques, automation, and integration with renewable energy sources.
- Prototype development involves fabrication, assembly, and testing to analyze water production rate, energy consumption, and output quality.
- Designed for scalability, making it suitable for residential use, industrial applications, and crisis management in drought-prone areas.
- Supports applications in farming, industrial water supply, daily consumption, and as a solution to water crises.

Product Done by:

B.E. Computer Science Engineering students:

1. Kowsalyadevi M
2. Kiruba K
3. Kanmani Priya M M
4. Preethe N

Guided by:

Dr. R. Devi Priya, Prof./ CSE

7. Underwater Inspection using Submerge Bot

- This project aims to develop a submersible robotic system for underwater inspection of structures, enabling cost-effective, accurate, and safe operations.
- Integrates a waterproof FPV camera for real-time visual inspection, ensuring accurate flaw verification through human judgment.
- Built with lightweight, durable materials to ensure maneuverability, reduced drag, and long-term integrity in underwater environments..
- Employs sensors such as ultrasonic flaw detectors, gyroscopes, and accelerometers along with BLDC motors for precise movement.
- Optimized with sensor threshold tuning, improved motor control, and user-friendly interfaces for enhanced inspection capabilities.

Product Done by:

B.E. Electronics and Communication Engineering

1. Sanjay Narayanan V
2. Pravin P
3. Nandha Kishore V S
4. Rahul J
5. Abhishek Nehru

Guided by:

Dr. Jagadesh,AP/ ECE

8. Home Automation

- This project focuses on developing a smart home automation system that enhances comfort, security, and energy efficiency through IoT and automation technologies.
- Allows users to remotely control appliances such as lights, fans, and electronic devices via smartphone apps or voice assistants.
- Integrates sensors (motion, temperature, humidity, gas, smoke) to enable automated responses and ensure a safer living environment.
- Implements smart security features including door-lock systems, surveillance cameras, and intrusion alerts.
- Optimizes energy consumption by scheduling and monitoring power usage, reducing electricity costs.
- Provides real-time monitoring and control with Wi-Fi or Bluetooth connectivity, ensuring ease of use for residents.

Product Done by:

B.Tech. Artificial Intelligence and Data Science students:

1. Manish D
2. Roopmann V
3. Kawin King C
4. Kavin

Guided by:

Mr. B. Prasath, AP/AIDS

9. Improving Human Posture and Health Globally

- The This project introduces the Slouchometer, an AI-powered system that detects and corrects poor posture in real time to enhance human health and productivity.
- Utilizes computer vision and deep learning (Mediapipe, OpenCV) to track body landmarks, calculate angles, and detect slouching.
- Provides instant feedback through audio and visual alerts, along with positive reinforcement messages for good posture.
- Logs posture data continuously, offering users personalized insights, progress tracking, and dashboards for health monitoring.
- Aims to reduce musculoskeletal issues, back pain, and fatigue while promoting long-term wellness and workplace ergonomics.

Product Done by:

Department of Artificial Intelligence and Machine Learning students:

1. Vaibhav Krishna S
2. Deepak Kumar R
3. Priyankha ACS
4. Shreya S

Guided by:

Mr. Biplap Das, AP/AIML

10. GuardianX: Advanced Safety Suit for Hazard Detection in Mines

- This project focuses on designing an advanced safety suit to protect miners by detecting hazardous conditions in underground environments.
- Equipped with temperature, humidity, and air quality sensors to continuously monitor environmental conditions.
- Incorporates wearable biometric monitoring (heart rate, oxygen levels) to track miner health and detect signs of fatigue or distress.
- Uses vibration and audio alarms embedded in the suit for immediate hazard warnings even without network access.
- Designed with lightweight, durable, and fire-resistant materials, ensuring both protection and comfort for miners.

Product Done by:

Department of Mechanical Engineering students:

1. R B Mithul Pranav
2. A M Dharani Balaji
3. S Shiva Naveen
4. K S Nithyashree
5. R Kavyashree

Guided by:

Dr. N. Mathan Kumar, Prof./Mech

G. Highlight selected best Innovations with Images

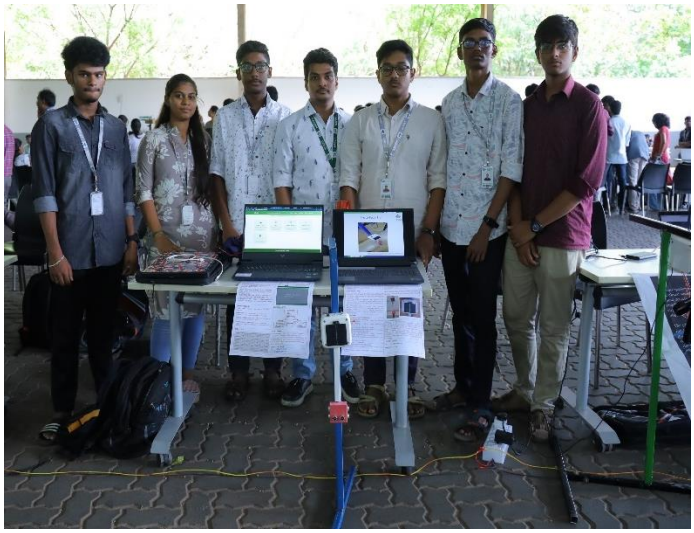






COIL DE-WAXING
MACHINE FOR
INVESTMENT CASTING


RADIO FREQUENCY SYSTEM

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H. Highlight selected start-ups established by students/faculties with mention of founder/co-founder name

LIST OF STARTUPS INCUBATED BY KIC

Name of the Startup	Name and contact details ofthe founders	About Startup	Kind of support byKIC
Do So	Ms.B.Samyuktha B	Deals with parking in overcrowded area.	Mentoring Support, Seed Grant support, Pre- Incubation facility Support, Incubation Support
The Foundax	Varun Murthi S	Specialize in Marketing, design, technology and Media, empowering small and medium-sized business to build impactful online presence	Mentoring Support, Seed Grant support, Pre- Incubation facility Support, Incubation Support
O2DoC	Nagaiyan K	Use semi-artificial way to purifier air to control air pollution and reduce Co_2 and offer particulate matters.	Mentoring Support, Seed Grant support, Pre- Incubation facility Support, Incubation Support
OZOTECH	Bharath K	Two-wheeler electric are designed for commercial and domestic use, offering reliable performance and long lasting battery life.	Mentoring Support, Seed Grant support, Pre- Incubation facility Support, Incubation Support
SeekNSolve Solutions	Rajeshkumar S	Focuses on innovative product development, with standalone solutions like E-INVO and PUPID, ready for Google Play Store integration.	Mentoring Support, Seed Grant support, Pre- Incubation facility Support, Incubation Support

Rexo IoT	Akash S	The Smart Water Management System in innovative solution designed to optimize water usage and prevent wastage.	Mentoring Support, Seed Grant support, Pre- Incubation facility Support, Incubation Support
Script2screen Creation	Priyadharshini I	Offers students to showcase their Skills.With a focus on quality, it provide High reach to entertain people by our contents.	Mentoring Support, Seed Grant support, Pre- Incubation facility Support, Incubation Support
ALVF	Vetrivel S	Specializes in developing innovative AR and VR solutions to revolutionize education, business and healthcare.	Mentoring Support, Seed Grant support, Pre- Incubation facility Support, Incubation Support
Vantablack	Sharvesh S	Provides AI-Driven web services and ML solutions that enhance efficiency while promoting sustainability and social welfare.	Mentoring Support, Seed Grant support, Pre- Incubation facility Support, Incubation Support
Rat Media	Thitheaswar K K	Helps People to Execute Their Social Media Marketing Ideas easily.	Mentoring Support, Seed Grant support, Pre- Incubation facility Support, Incubation Support
Aadhira Holidays	Abhinav M	Helps people to travel the world without any hassle.	Mentoring Support, Seed Grant support, Pre- Incubation facility Support, Incubation Support

I. Break through Innovations / Technology Developed at the institute

KPRIET Creates India's First Fully Functional Humanoid Robot

KPR Institute of Engineering and Technology (KPRIET) has marked a historic milestone by creating India's first fully functional humanoid robot—a remarkable achievement led by our professors and students. The humanoid was officially inaugurated by Former ISRO Scientist Dr. Sivathanu Pillai, adding immense prestige to the occasion.

Standing at 6 feet tall and weighing 40 kg, the humanoid robot is powered by advanced AI integration and was brought to life in just 1600 hours using cutting-edge 3D printing technology.

Key Highlights:

- Performs 26 human gestures with precision
- Interacts with humans using AI-powered communication
- Operates with 48 degrees of freedom
- Entirely developed in-house, with all parts 3D printed at KPRIET

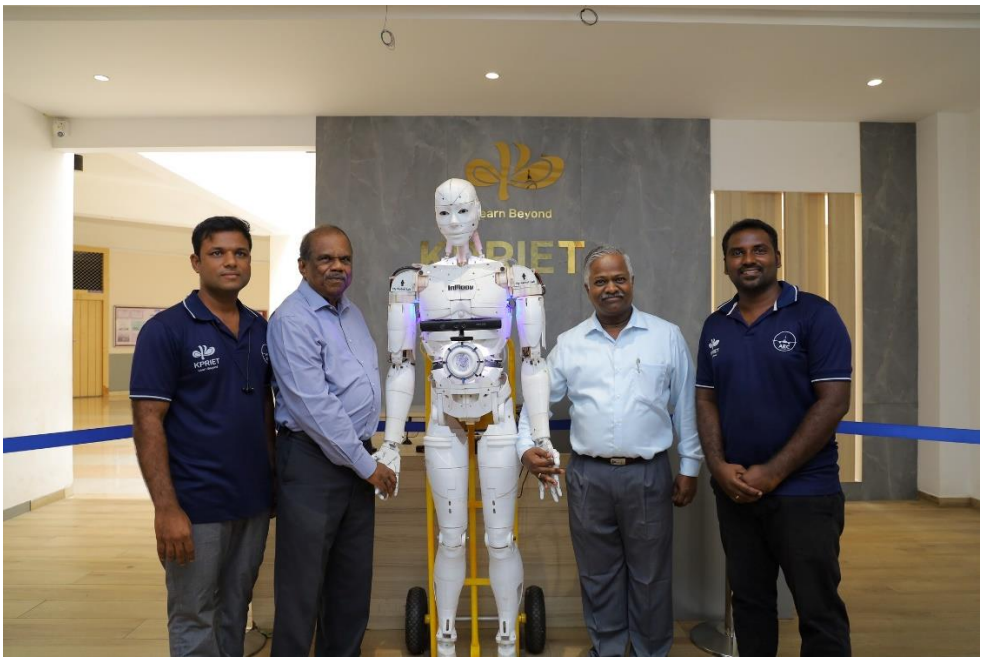
During the grand inauguration, Dr. K P Ramasamy, Chairman, KPR Group, honored Dr. Arivazhagan, Innovation Officer, Mr. Xavier Richards, Associate Innovation Officer, and 18 brilliant students from 10 departments who dedicated their expertise to this innovation.

Learning Beyond the Classroom

The project not only showcases the potential of KPRIET's innovation ecosystem but also provided students hands-on experience in:

- 3D printing and manufacturing
- Prosthetic mechanics
- Circuit implementation
- Embedded programming
- AI integration

This extraordinary achievement redefines the boundaries of student innovation, proving that at KPRIET, we truly set new limits unlimited.



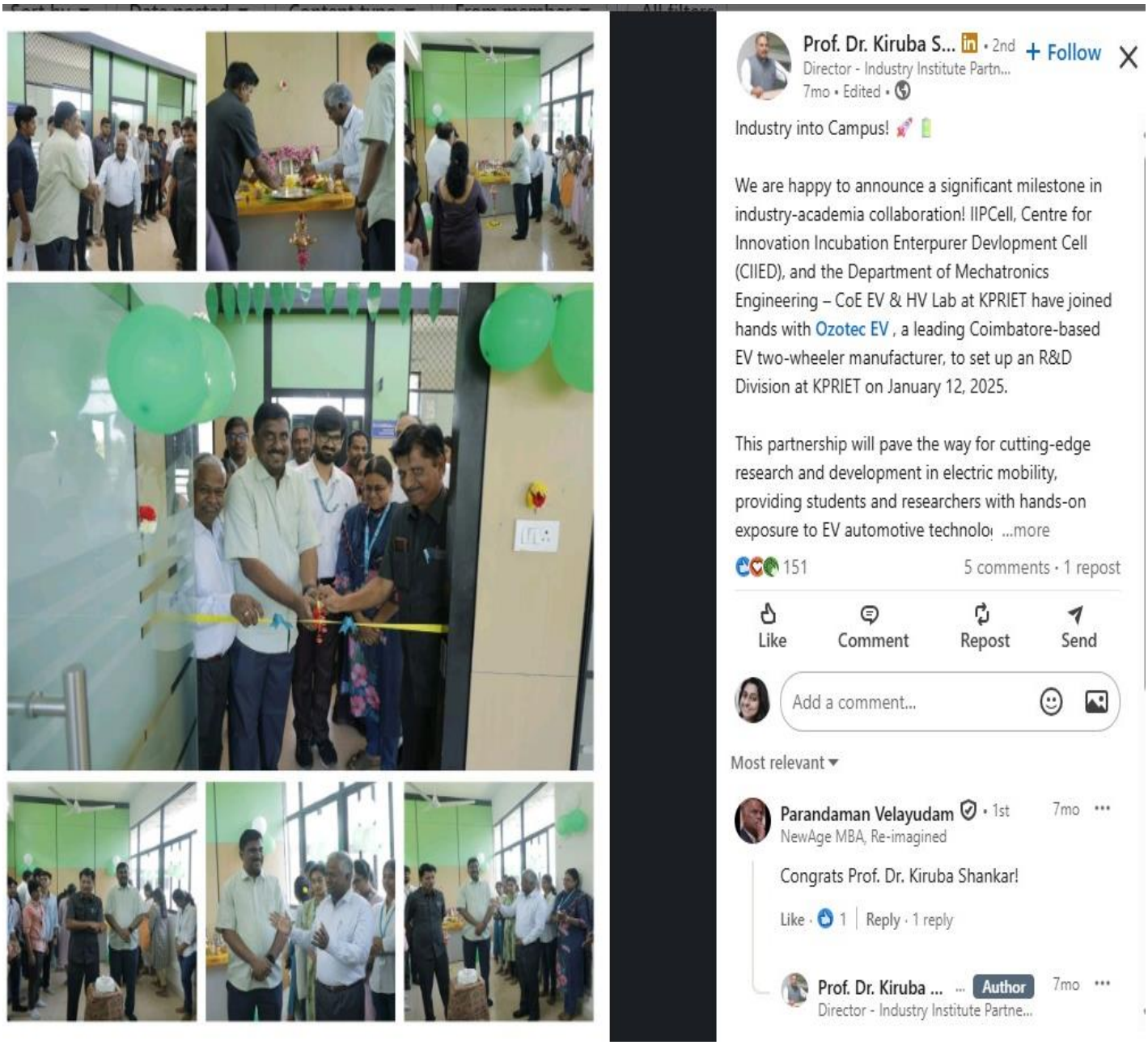
J. Participation of IIC-institute in various programs of Central and stage Govt. Highlighting specially for the schemes or programs

- NIRF Rank **: Innovation ranking 51-100**
- NISP Adoption status - Trained Faculty, Policy Formulation, Policy Implementation **: Implemented**
- Smart India Hackathon etc. **: Conducted**

K. Detail of social media & Connections of IIC institute

- Facebook : https://www.facebook.com/KPRIETonline
- Instagram : https://www.instagram.com/kprietonline
- Twitter : https://twitter.com/KPRIETonline

L. Testimonials from IIC members and external about IIC institute and IIC of MoE's Innovation Cell



Bishnu Thakur • 1st
@KPRIET-Anna University||Ex- SIP@SAIDE'25 I...
5mo •

"Rehabilitation therapy is not just about healing—it's about rebuilding strength, retraining muscle memory, and restoring confidence one small step at a time."

Sometimes, the most meaningful innovations come from observing real challenges up close.

When our mentors visited #NIEPMD Chennai, they shared something that stuck with us:
Many individuals—especially those recovering from stroke, those on the autism spectrum (ASD), or living with neurological disorders—struggle deeply with hand-eye-brain coordination. Simple movements we often take for granted become overw ...more

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Final Year | Specialized in Machine learni...
Congratulations guys

Like • 1 | Reply • 1 reply

Bishnu Thakur Author 5mo
@KPRIET-Anna University||Ex- SIP...
Prabhat Kumar Gupta thank you so much

Muthulakshmi S • 2nd
Assistant Professor at KPR Institut...
5mo •
+ Follow

Super!!!! proud to share that on April 9, 2025, our students launched their IoT startup REXOIoT. It was a special moment with Prof. Hee Yong Youn, College of Software, Sungkyunkwan University, Suwon, Korea, as the Guest of Honor. The students did a fantastic job explaining their ideas and future plans .
A big thanks to our Management, Dr. D. Saravanan (Principal), Dr. P. Sreelatha (CIIED Coordinator), and Dr. K. Kamaraj (HoD/IT) for always supporting our students and their dreams.
I'm really happy to be part of this journey as the Advisor of REXOIoT. Wishing the team all the success — keep shining and innovating!

#StartupJourney #REXOIoT #IoTInnovation #Advi ...more

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Akshaya Shankar • 2nd 5mo
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Big congrats, Mam

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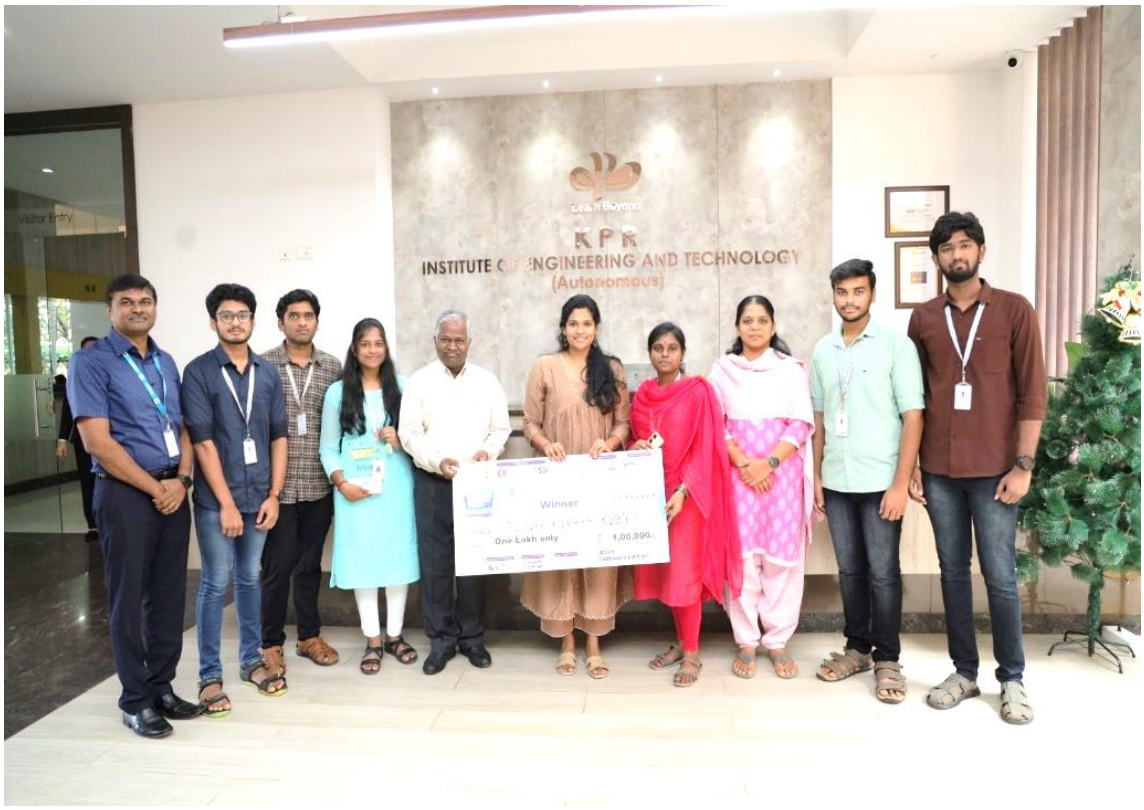
M.Images


KPR
INSTITUTE OF ENGINEERING AND TECHNOLOGY
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Winner
One Lakh only
1,00,000/-


Chief Guest

N. Contact

Dr.D.Saravanan KPR-IIC President
Principal
KPR Institute of Engineering and
TechnologyCoimbatore
Mail Id: principal@kpriet.ac.in

Dr.P.Sreelatha

KPR-IIC Vice President
Prof/ Department of Biomedical Engineering
KPRInstitute of Engineering and Technology
Coimbatore
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