

## **Internship Program at Rockwell Automation**

**DATE:** 02.01.2024-29.01.2024

**Venue:** Rockwell Automation, Noida, Uttar Pradesh-201301

During a 4-week internship at Rockwell Automation India Pvt Ltd, Noida, from 02 January -29 January 2024, a group of students, Saikat Sarkar, Neeladri Hazra, Shayan Sengupta, and Anubhab Pal, underwent intensive hands-on training on Allen Bradley ControlLogix (PLC), Studio 5000 and RSLogix (PLC software), and FactoryTalk Studio (SCADA). This comprehensive training program covered both hardware and software, with a strong emphasis on the design and implementation of automation solutions in industrial environments.

The group worked on a project titled 'Taming Manual to Automation: Transforming Thermal Power Plant Operations using PLC and SCADA.' The project focused on enhancing operational efficiency and reliability in a water treatment plant within a thermal power plant environment. The scope of the project included the design and integration of automation systems using PLC and SCADA technologies, ensuring seamless operation and control within the plant.

In addition to project work, the interns participated in panel checking at the Sahibabad factory, where they inspected MRF panels, reviewed GA drawings, and performed ferruling before the panels were dispatched. This experience provided them with valuable insights into the practical aspects of industrial automation, from design to final deployment.

The internship, organized by the IET Kolkata Local Network, offered these students an in-depth understanding of modern automation technologies, significantly enhancing their skills in implementing advanced solutions for industrial operations.



## **Student Poster Presentation Competition**

**DATE:** 13.01.2024

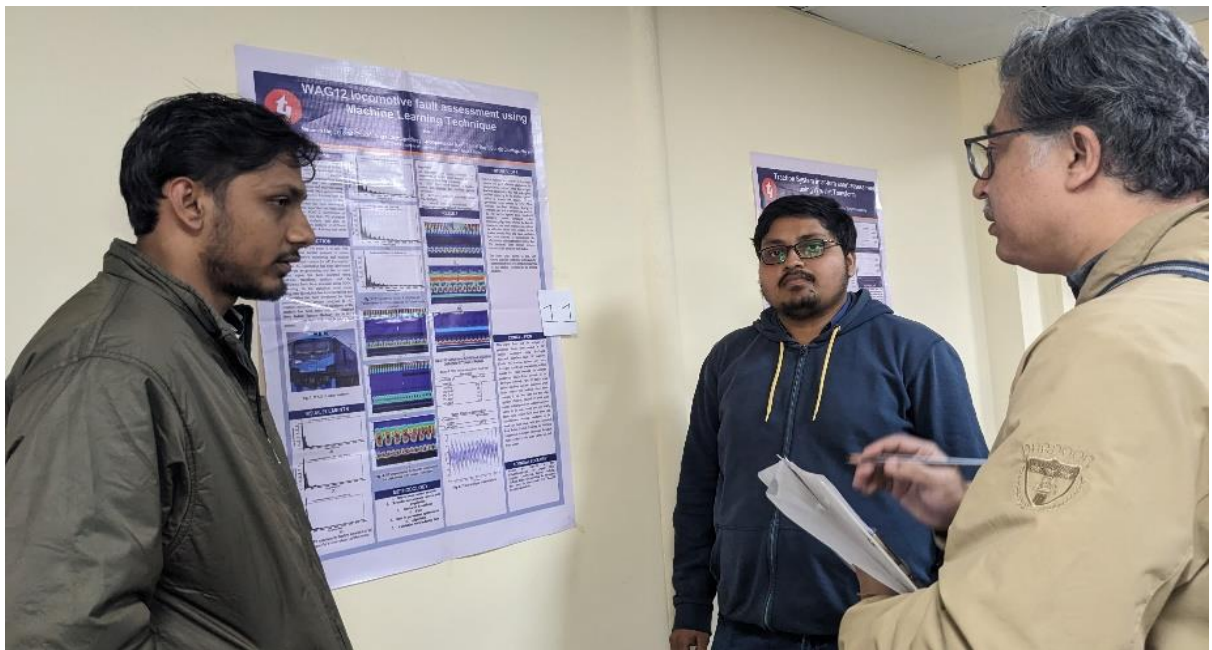
**Venue:** TECHNO MAIN SALT LAKE

On 13th January 2024, Techno Main Salt Lake conducted a Student Poster Presentation Competition jointly with the IET (UK) Kolkata local network. In this event, a total of 41 students are participating. Students are from ECE, EE, EIE, and IT. CSE-AIML, IT, CSE-IoT departments. Submission proposal for Student Poster Presentation Competition from TMSL, MCKV, HERITAGE INSTITUTE OF TECHNOLOGY, DREAM INSTITUTE OF TECHNOLOGY, and GNIT. The committee members decided to select 21 groups out of 25 for the Student Poster Presentation in the first round. A total of 21 groups were finally presented to the judges on January 13th, 2024. Finally, three successful groups were awarded.

Position	TOPIC	Student Name	College Name(DEPT.)
1ST	IoT-based system for measuring ethylene and correlating with ripening of banana	Shalini Chanda	TMSL( FT)
2ND	BAN in Telemedicine	Sikta Laha	TMSL (IT)
3RD	Automated Paralysis Healthcare System	ARYA SAHA	TMSL (ECE)







## **Industrial Visit at Southern Generating Station CESC.**

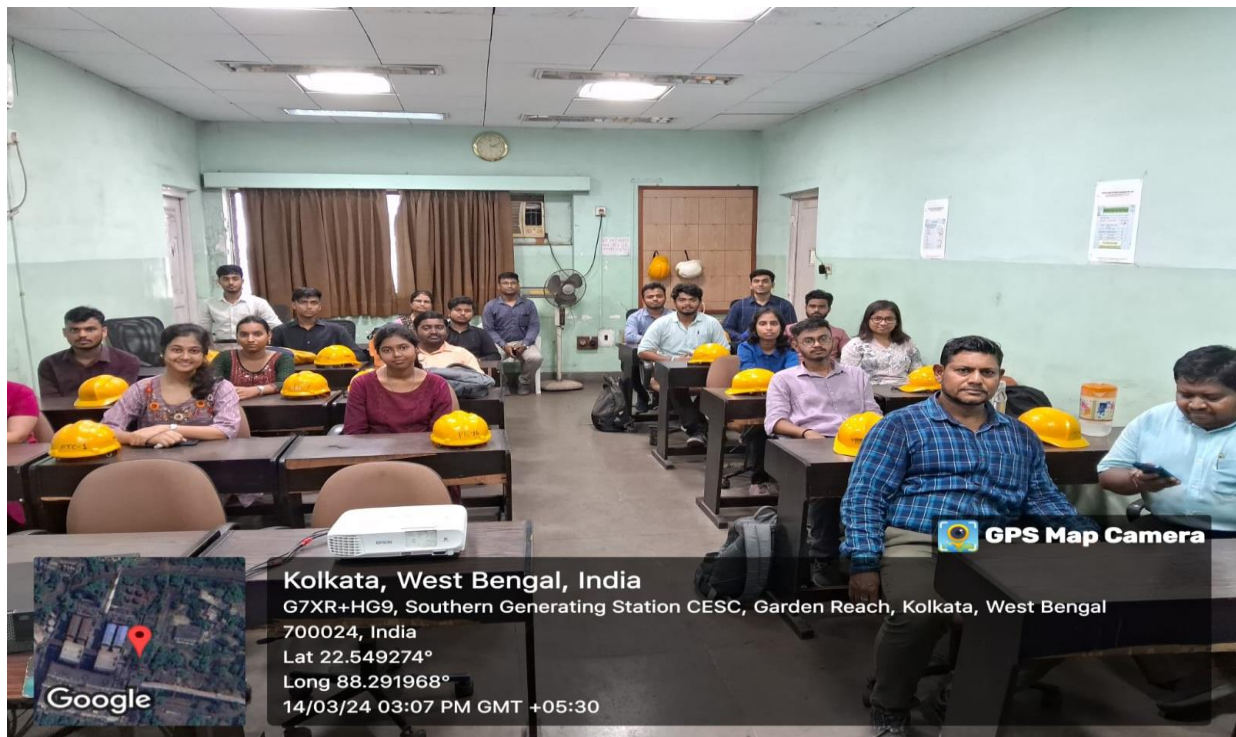
**DATE: 14.03.2024**

**Venue: Garden Reach, Kolkata, W.B-700024**

On 14th March 2024, members of our beloved IET student chapter had the privilege of visiting the Southern Generating Station CESC in association with the IET (UK) Kolkata Local Network. A total of 17 student members were fortunate to participate in this insightful program, accompanied by our esteemed faculty members: Prof. Subhajit Bhowmick, Prof. Sanghamitra Manna, and Mr. Arnab Karmakar.

During this one-day industrial visit, we gained invaluable insights into the workings of the industry, learning how they manage and control complex systems. The day was filled with informative sessions, including an inspiring speech by one of their expert personnel. We also had the opportunity to explore the entire facility, deepening our understanding of industrial operations.

This visit significantly enhanced our knowledge and has further motivated us in our academic and professional pursuits.







## **Eccentron 2024**

**DATE:** 26.04.2024 and 27.04.2024

**Venue:** TECHNO MAIN SALT LAKE

Eccentron 6.0, the annual flagship event of the Electrical Engineering Department at Techno Main Salt Lake, was held on 26th and 27th April 2024. Organized in collaboration with the IET Kolkata Local Network and powered by the TMSL on Campus IET Student Chapter, the event celebrated the department's commitment to fostering innovation and excellence.

### **Day 1:**

The event commenced with a lecture on World Intellectual Property Day by Dr. Samarjit Sengupta, former Professor at the University of Calcutta. The Tech Craft Challenge allowed students to showcase their engineering skills through hardware model-making, while the Poster-ity Project featured innovative ideas presented through technical posters. The first round of the Circuit Conclave tested students' circuit design capabilities, followed by the Mind Mantra quiz competition, which spanned a wide range of topics. The day also included Photo Finesse, a photography competition focusing on originality and visual storytelling.





### **Day 2:**

The second day featured the final round of the Circuit Conclave, where students further demonstrated their technical acumen. The Argue Arena debating tournament honed participants' critical thinking and communication skills. An Alum Talk session provided insights from distinguished alumni, offering guidance and inspiration to current students. The event concluded with Ted Talks by RJ Arvind and Rohit Dey, who shared their expertise on culture and technology.







## **HANDS ON WORKSHOP ON INTRODUCTION of IoT with ML MODEL(ECE)**

**DATE:** - 20.04.24 to 28.04.2024

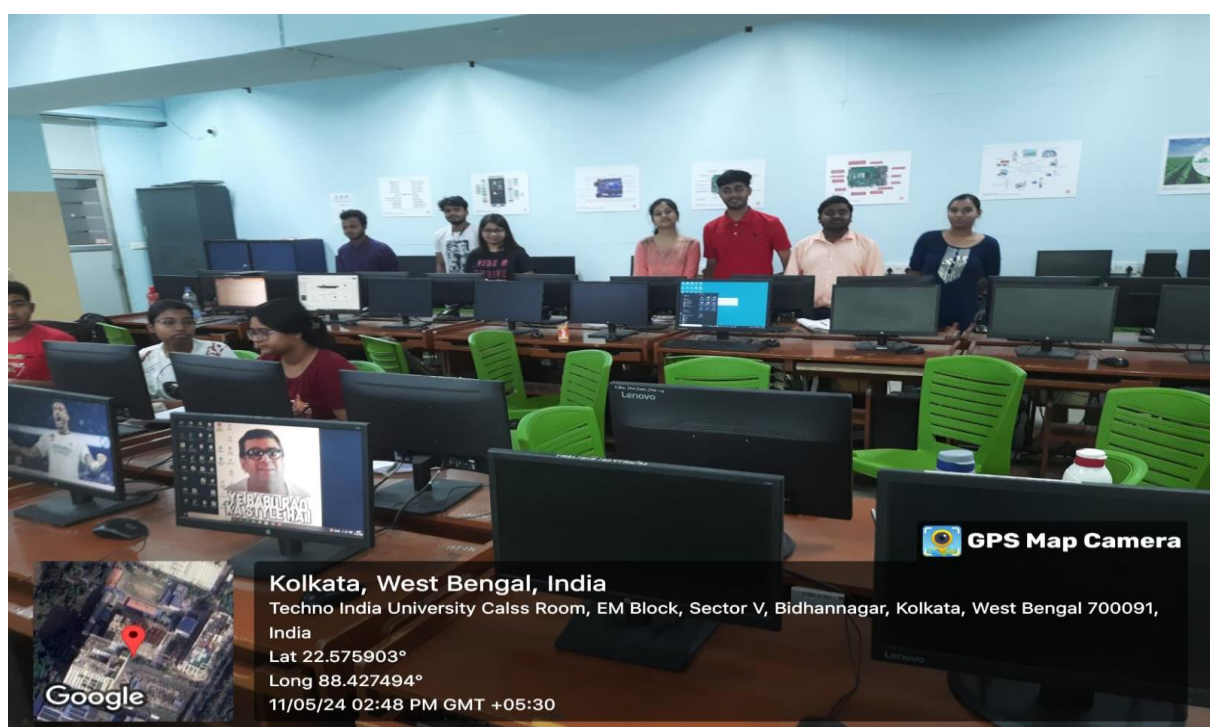
**Venue:** TECHNO MAIN SALT LAKE

The IET Kolkata Local Network recently organized an 8-day Machine Learning (ML) workshop, which witnessed the active participation of 30 students from the Electronics and Instrumentation Engineering (EIE) and Electronics and Communication Engineering (ECE) departments. This comprehensive workshop was designed to introduce participants to the fundamentals of machine learning, along with practical applications relevant to their fields of study.

Over the course of eight days, the students engaged in a blend of theoretical sessions and hands-on exercises, enabling them to grasp core ML concepts such as supervised and unsupervised learning, neural networks, and data preprocessing. The workshop also covered various ML algorithms, including decision trees, support vector machines, and k-nearest neighbors, providing participants with a robust foundation in machine learning.

In addition to the technical content, the workshop emphasized collaborative learning, with students from different disciplines working together on group projects. This interdisciplinary approach facilitated a deeper understanding of how ML techniques can be applied across various domains within engineering.

Overall, the workshop was a significant learning experience, equipping the participants with essential skills in machine learning, and fostering a collaborative environment that encouraged the exchange of ideas and knowledge among the students.



## **Wavicle 5.0**

**DATE:** 07.05.2024/14.05.2024

**Venue:** TECHNO MAIN SALT LAKE

On 7th May 2024, Techno Main Salt Lake, in collaboration with the IET (UK) Kolkata Local Network, organized "Wavicle 5.0," a significant event aimed at fostering technical knowledge and innovation among students.

Event Details: The first half of Wavicle 5.0 featured two insightful technical talks. The first was delivered by Dr. Subhamoy Maitra, Professor at the Applied Statistics Unit of the Indian Statistical Institute, on the topic of "Quantum Computing." The second talk was given by Dr. Kanik Palodhi, Assistant Professor in the Department of Applied Optics and Photonics at the University of Calcutta, who spoke on "Nanoscopy."

The second half of the event was dedicated to student demonstrations of prototype designs. Submissions were received from multiple institutions, including Techno Main Salt Lake, Heritage Institute of Technology, Academy Institute of Technology, and B.P. Poddar Institute of Technology. Out of 32 submitted abstracts, 24 were selected by the committee, and 17 groups presented their prototypes on 14th May 2024.

Judges: The event was judged by:

1. Dr. K L Hassan, Aliah University.
2. Dr. J.K. Roy, EC Member of IET.
3. Prof. Bapita Roy, Gurunanak Institute of Technology.

Position	College Name	Student Name
1ST	TECHNO MAIN SALT-LAKE	ARIGHNA MUKHERJEE
2ND	TECHNO MAIN SALT-LAKE	RAMKRISHNA PANDEY
3RD	B.P.PODDAR	MOOKUL PAUL





# **MSME TRAINING REPORT**

**session--:** 08.07.24 to 25.07.24

**Venue:** MSME TOOL ROOM - KOLKATA

**Report:** In this training program, students from IET (Total 14 students of EIE Dept.) have learnt about Industrial Automation, an industry based automatic process. 15days Training on Industrial Automation in the beginning the students have got a brief knowledge about basic industrial controls, relay logic controls, different switching techniques, relay operation etc. Then the students have acquired a brief knowledge about PLC hardware modules and software interface. They have learnt about NO-NC, SPDT, LATCH, TIMER etc different operands of PLC LADDER programming along with practical sessions. After getting knowledge about PLC, the students have got knowledge about SCADA control. In this, they have learnt about Graphical User Interface system and also undergone through practical session for different industrial layout designs and controls like Inch operation, Latch operation, Motor F-R operation etc. And finally, the students have got knowledge about the Hybrid Control system through the online communication with PLC hardware and SCADA interfaces.

**Outcomes:** After doing this training program, students can get a brief idea about the industry based automatic process specially Hybrid Control or Physical-Logical control system in the process industries, packaging industries, steel plants, manufacturing industries etc.





## **TECH AI REPORT**

**DATE: -08:08:2024-09:08:2024**

**Venue: -TECHNO MAIN SALT LAKE**

The Institute Innovation Council (IIC) organised an exhilarating “Techno Hackathon” on August 8th and 9th, in association with the Department of Computer Science and Engineering (AIML) and CSE (Data Science). This high-energy event, held in collaboration with The Institute of Engineering and Technology (IET), Kolkata, brought together some of the brightest young minds to solve real-world challenges through technology and innovation. The two-day event brought together tech enthusiasts from across the region, challenging them to solve real-world challenges using creative solutions in artificial intelligence, machine learning, and data science.

**Day 1:** Idea and Implementation (August 8) On the first day, all participating teams presented their AI-based application ideas focused on specific domain areas, such as healthcare, financial, education, transportation, retail, state cities, agriculture, and entertainment. The event featured presentations from 38 teams, out of 58 registered teams, comprising approximately 125 participants. This step was critical as it allowed each team to exhibit their creative ideas and demonstrate their potential impact. The participants’ suggestions were diverse, displaying their ingenuity and technical expertise. The teams showcased their ideas to a distinguished panel of judges, including Dr. Shibaprasad Sen (MCKV), Dr. Tapashi Bhattacharjee (TINT), Dr. Madhurima Chattopadhyay (Heritage Institute of Technology), Dr. Joyti Sekhar Banerjee (Bengal Institute of Technology), Dr. Shushant Kumar Bhattacharjee, the retired Principal of Techno Main Salt Lake, and Dr. Abhishek Das. The judges selected ten teams for their originality, technical depth, and potential impact, allowing them to advance to the next competition phase.

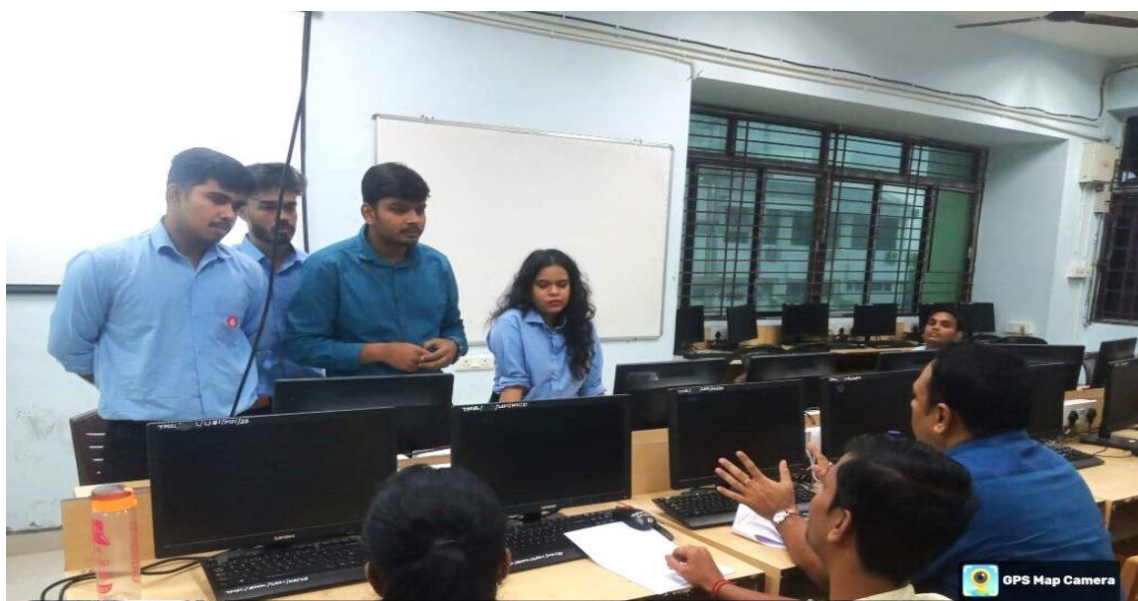






**Day 2:** Business Plans and Startup Ideas (August 9) The second day was similarly intense and thrilling, with the top ten teams from Day 1 taking the stage to present their business plans and startup ideas centred on their AI-powered applications. During this phase, teams were needed to not only develop their technical solutions but also describe their projects' market potential, business viability, and execution strategy.

The event began with ceremonial lamp lighting, led by Dr. Soumik Das, Vice Principal, Head of CSE (AIML) and CSE (DS), TMSL, Prof. Soumitra Sasmal, Registrar, TMSL, Dr. Dharmadas Mandal, Dean of Academics, TMSL, Dr. Sudipta Chakrabarty, IIC Convenor, and Prof. Subhajit Bhowmick, IIC President. Following the inauguration, speeches were delivered by these dignitaries, emphasising the importance of innovation, entrepreneurship, and the role of AI in shaping the future. The day continued with the business plan presentations, where teams were evaluated based on the viability, scalability, and social impact of their ideas.



**Winners and Awards:** The judges were impressed by the quality of the projects, making the selection of winners a challenging task. The hackathon concluded with the announcement of the winning teams. The awards were distributed as follows:

Winner: Team Decodians, CSE (AIML), TMSL

- 1st Runner-Up: Pill-Pals, EIE, TMSL
- 2nd Runner-Up: Symphony Surfers, CSE (DS)
- 3rd Runner-Up: MediTrack, EIE, TMSL

The awards were presented by Prof. (Dr.) Dipankar Bhattacharyya, Principal of TMSL, along with other dignitaries. The event was a significant success, providing students with invaluable experience and recognition for their innovative efforts.

The Techno Hackathon 2024 was a key platform for aspiring technologists to collaborate, innovate, and gain practical experience. It emphasised interdisciplinary teamwork and addressed real-world challenges, providing valuable exposure in the tech industry. This successful inaugural event set a high bar for future hackathons, showcasing the Institute Innovation Council, CSE departments, and IET Kolkata's commitment to nurturing future innovators. Participants left with not only prizes and recognition but also a renewed passion for technology and a robust network of peers and mentors to support their future endeavours.