

IEEE Silchar Subsection Student Summer Internship Program - 2024 (IS3IP-2024)

The IEEE Silchar Subsection is pleased to announce the “*Student Summer Internship Program 2024*” preferably for First Year or Third Year UG Students (after completion of 2nd semester or 4th semester) of Science, Technology, Engineering, and Management Background.

- The internship is of 6-8 weeks, starting from June 2024 and ending by July 2024 through online mode.
- Upon completion of the internship, students will receive the INTERNSHIP COMPLETION CERTIFICATE from the IEEE Silchar Subsection.
- No scholarship/ fellowship will be provided for this internship.

Broad Areas of Internship Program:

Internship projects will be provided within the following broad areas of:

A. Computer Science & Engineering Discipline:

- AI and ML (Mentor: **Dr. Partha Pakray**, NIT Silchar, Email- partha@cse.nits.ac.in)
- Natural Language Processing (Mentor: **Dr. Partha Pakray**, NIT Silchar)

B. Electronics and Communication Engineering Discipline:

- Quantum Electromagnetics (Mentor: **Dr. Taimoor Khan**, NIT Silchar, Email- ktaimoor@ece.nits.ac.in))
- Bio-Electromagnetics (Mentor: **Dr. Taimoor Khan**, NIT Silchar)
- Intelligent Reflecting Surfaces based High Frequency Communication. (Mentor: **Dr. Taimoor Khan**, NIT Silchar)
- AI/ML-based Modeling, Optimization, and Classification of Electromagnetic Problems. (Mentor: **Dr. Taimoor Khan**, NIT Silchar)

C. Electric Vehicles and Charging Infrastructure Discipline:

- **Emerging Technologies of Wireless Charging System for EVs** (Mentor: **Dr. Kundan Kumar**, NIT Manipur, Email- kundankumar.nitm@gmail.com)
- **Off board high voltage charging infrastructure for EVs as per Indian standard** (Mentor: **Dr. Amritesh Kumar**, NIT Silchar)

D. Battery Health Diagnostics and Sustainable Development:

- Online EIS measurement for health diagnosis in EV batteries. (Mentor: **Dr. Munmun Khanra**, NIT Silchar, Email- munmun@ei.nits.ac.in)
- Battery management and machine learning based health diagnostics. (Mentor: **Dr. Munmun Khanra**, NIT Silchar)

E. Power Electronics, Electrical Drives & Control :

- Design & development of 1) Underwater Autonomous Vehicles, their control and applications; 2) Mobile application to measure the correctness of Pranayam in terms of number/ sec and postures and suggest corrections, 3) Solar-based trimming of lawns and trimming of bushes for a 5000 + population campus, 4) Solar-based road cleaner along with bruising for a 5000 +

population campus, 5) Drones for different societal applications, 6) Advanced Battery Management System of electrical vehicles to overcome sudden explosion of batteries, 7) Nonlinear dynamics and chaos, their control with advanced nonlinear controllers and applications, including secured communications, 8) Designing an awareness program on cybersecurity for common people, 9) Develop a unified criterion for using blockchain technologies to satisfy cybersecurity properties, 10) Stability analysis of networked-isolated micro-grids in the presence of source, load disturbances and faults. (Mentor: **Prof. B. K. Roy**, NIT Silchar, Email- bkr@ee.nits.ac.in)

- Grid Integration & Control of Induction and Synchronous based Wind Energy Conversion Systems, HVDC Systems (Mentor: **Dr. Asha Rani M. A.**, NIT Silchar, Email- asharani@ee.nits.ac.in))
- Design and development of 1) micro grid for critical infrastructure, 2) Home/commercial energy management systems (Mentor: **Prof. Arvind Kumar Jain**, NIT Agartala, Email- arvindjmp@gmail.com)

Eligibility for Summer Internship Programme:

1. Students should be First Year or Third Year UG Students (after completion of 2nd semester or 4th semester) of Science, Technology, Engineering, and Management Background.
2. Students must preferably be an IEEE Student Member and/or IEEE Society Student Member.
3. Students should undertake the internship preferably as a group (maximum group size: 4 members)
4. **Students should submit the internship request letter endorsed/signed preferably by their HODs, and respective Internship Mentor.**
5. The internship will be under the mentorship of above IEEE Members, who are from the various institutes of National Importance within the geographical reach of the IEEE Silchar Subsection.
6. Applicants above **CPI 7 or 70% (First Semester for II Semester Completion/ avg of up to third Semester for IV semester Completion)** can apply.
7. No accommodation will be provided to intern students.
8. **Letter of consent from host faculty should be submitted along with the application form.**
9. The Student/Student Team should submit an Internship Completion Report within the stipulated deadline.
10. **The Fee structure of Internship is as follows:**

IEEE Student Members : NIL

Non-IEEE Student Members: INR 1200/- which will be reimbursed once the intern enrolls for IEEE Student Membership during or after the Internship

The last date for registration is **26th May 2024 (11:59 PM IST)** through the following Google form link- <https://forms.gle/xaxsaieAg3425N5U8>

Selection procedure:

After the submission of applications, a thorough review of the applications will take place. The list of shortlisted applicants will be informed via email.

- **Call for Internship:** May 21, 2024
- **Last date to Apply:** May 26, 2024 (11:59 PM IST)
- **Information regarding acceptance of Summer Internship :** May 28, 2024