Kritanu Chattopadhyay

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Education

Delhi Public School Newtown — Kolkata, West Bengal
Class X – 97.8% — *Apr 2021*

Hariyana Vidya Mandir, Salt Lake — Kolkata, West Bengal
Class XII – 92.8% — *Apr 2023*

National Institute of Technology, Durgapur — Durgapur, West Bengal
B.Tech in Mechanical Engineering, CGPA: 7.82, Clubs: ARRG, SAE, IIC, MESA. — *Aug 2023 – Present*

Experience

Indian Institute of Technology, Patna — July 2025 - Present
Undergraduate Research Intern at the Department of Computer Science and Engineering, IITP — *Remote*

- Under the supervision of *Prof. Sriparna Saha*, guided by PhD Scholar Sofia Jamil.
- Working on Cancer Pharmacovigilance using NLP techniques.

Autonomous Systems Laboratory, IIT Madras — May 2025 – July 2025
Undergraduate Project Intern at Department of Engineering Design, IITM — *Chennai, Tamil Nadu, India*

- Under the supervision of *Prof. Bijo Sebastian*, *Prof. Sandipan Bandyopadhyay* and *Prof. G. Saravana Kumar*.
- Utilized **Altair MotionSolve** to develop and validate dynamic simulations for a company-sponsored project, focusing on the performance analysis of a novel farm vehicle.

Mechatronics Lab, IIT Delhi — Feb. 2025 – Present
Undergraduate Research Intern — *Remote*

- Undergraduate Research Intern under the supervision of *Professor Subir K. Saha*.
- Currently utilizing **Visual C#** to develop and enhance the backend of **RoboAnalyzer**, a robotics analysis and visualization software.

CMATER Lab, Jadavpur University, Kolkata — Dec 2025 – Present
Undergraduate Research Intern — *Remote*

- Undergraduate Research Intern under the supervision of *Professor Debotosh Bhattacharjee*.
- **Project II** - Applying **AI/ML methods** to classify **Cassava Leaf Diseases**, supporting precision agriculture through automated disease detection.
- **Project I** – Formulated an ensemble-method approach to estimate **SPAD (Soil Plant Analysis Development) values** from rice leaf imagery as part of a precision agriculture study, with results documented in a research paper accepted to **COMSYS 2025 (Warsaw, Poland).**

Robotics and Automation Laboratory, IIT Patna — Dec 2025 – Jan 2025
Undergraduate Research Intern — *Bihta, Bihar, India*

- Undergraduate Research Intern under the supervision of *Professor Karali Patra*, guided by PhD Scholar Surya Prakash Singh.
- Leveraged **MATLAB** and **Python** skills to develop the code of a transformation matrix between two given points on a free form surface to find the rotation angles and the translational matrix.

Technical Skills

Soft Skills: Communication, Community Outreach and Business Marketing.
Languages: MATLAB, Python, C, Visual C#, LaTeX.
Frameworks: PyTorch, Tensorflow, Scikit-Learn, Mediapipe.
Developer Tools: VS Code, Visual Studio.
Libraries: Pandas, NumPy, Matplotlib, Seaborn, OpenCV, OpenTK, HelixToolkit3D.
Simulation Softwares: Ansys WorkBench, Simulink, Altair MotionSolve, Altair HyperMesh, Altair HyperGraph.
CAD tools: SolidWorks, Autodesk Fusion360, CATIA V5R19.
Currently Undergoing: A 45 Days Training Programme in Robotics and AI - ROBOAI.

Achievements

- Paper accepted for presentation at **COMSYS 2025 (Warsaw, Poland)** on SPAD estimation using ensemble learning under the supervision of Prof. Debotosh Bhattacharjee, CMATER Lab, Jadavpur University.
- Semi-Finalist in Flipkart GRiD 6.0 - Robotics Track.
- Participated in the Bharatiya Antariksh Hackathon by ISRO.

Interests

Artificial Intelligence : Machine Learning, Deep Learning, Natural Language Processing, Large Language Models, Reinforcement Learning and Computer Vision.
Robotics : Mobile Robotics and Manipulator Robotics