

Kritanu Chattopadhyay

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EDUCATION

Delhi Public School Newtown

Class X – 97.8%

Kolkata, West Bengal

Apr 2021

Hariyana Vidya Mandir, Salt Lake

Class XII – 92.8%

Kolkata, West Bengal

Apr 2023

National Institute of Technology, Durgapur

B.Tech in Mechanical Engineering, CGPA: 7.82

Durgapur, West Bengal

Aug 2023 – Present

EXPERIENCE

Indian Institute of Technology, Patna

Undergraduate Research Intern at the Department of Computer Science and Engineering, IITP

July 2025 - Present

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

Undergraduate Project Intern at Department of Engineering Design, IITM

May 2025 – July 2025

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

Undergraduate Research Intern at Department of Mechanical Engineering, IITD

Feb. 2025 – Present

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

Undergraduate Research Intern at Department of Computer Science Engineering, Jadavpur University

Dec 2025 – Present

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

Undergraduate Research Intern at the Department of Mechanical Engineering, IITP

Dec 2025 – Jan 2025

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.

National Institute of Technology Durgapur

Undergraduate Research Intern

Jan 2025 - Present

Durgapur, West Bengal, India

- Under the supervision of *Prof. Nirmal Baran Hui* (Department of Mechanical Engineering) where I am using **MATLAB** and **Simulink** to device a walking biped robot that can jump. It is a collaborative project with Mr. Debanuj Roy.
- Under the supervision of *Prof. Aritro Dey* (Department of Electrical Engineering) where I am developing a tracking sliding mode controller and apply the same in a UAV using **MATLAB** and **Simulink**. It is a collaborative project with Mr. Siddhartha Kundu.

TECHNICAL SKILLS

Soft Skills: Communication, Community Outreach, Content Writing and Business Marketing.

Languages: MATLAB, Python, C, Visual C#, L^AT_EX.

Hardware: Arduino, ESP32

Mathematics: Linear Algebra, Statistics, and Calculus.

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.
- Ranked 7th among all the teams that participated in **Prodylitics 2024** organised by IIM Indore.

EXTRA - CURRICULAR

Society of Automotive Engineers Collegiate Club <i>Senior Coordinator</i> <ul style="list-style-type: none">• Domain - Robotics, Machine Learning and Automobiles.• Introduced the weekly F1 Magazine - Through the Formula Lens as a part of SAE.• Organized the Aarohan as a member of Team Aavishkar.	May 2025 - Present <i>On-site</i>
Mechanical Engineers' Student Association, NIT Durgapur <i>Senior Coordinator</i> <ul style="list-style-type: none">• Organised the CADathon - a hackathon aimed at promoting CAD designing through the institute.	March 2025 - Present <i>On-site</i>
Innovation and Incubation Cell, NIT Durgapur <i>Student Volunteer</i> <ul style="list-style-type: none">• Actively involved in producing curated content for the website of IIC NIT Durgapur.• Member of the official Content Wing of IIC NIT Durgapur.• Team Member of AI2Summit Team and the IIC Chronicles.	Feb 2025 - Present <i>On-site</i>
Team NDORS, NIT Durgapur <i>Senior Member</i> <ul style="list-style-type: none">• Member of the BAJA SAE NIT Durgapur Team NDORS.• Involved in the Computer Aided Engineering and Steering System team of Team NDORS.	Jun 2025 - Present <i>On-site</i>
Aerial Robotics Research Group, NIT Durgapur <i>Senior Member</i> <ul style="list-style-type: none">• Involved in the team AI/ML, Microcontroller and CAD Design tracks.	Jun 2025 - Present <i>On-site</i>
NayePankh Foundation <i>Fundraising Intern</i> <ul style="list-style-type: none">• Raised INR 5001 for the cause of providing sustainable education to the underprivileged children.	Aug 2024 <i>Remote</i>
Rendezvous, IIT Delhi <i>Campus Ambassador</i> <ul style="list-style-type: none">• Promoted the fest and their sponsors within the institute.	Aug 2024 - September 2024 <i>Remote</i>
Earth5R <i>Content Writer</i> <ul style="list-style-type: none">• Wrote multiple articles promoting environmental awareness.	Aug 2024 - Dec 2024 <i>Remote</i>

INTERESTS

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

Robotics : Mobile Robotics and Manipulator Robotics