

Sarbajit Sarkar

Physics Major & Computer Science Minor

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VISIT MY WEBSITE

You are welcome to visit my personal homepage at <https://sarbajit-home.github.io/> to know more about me.

EDUCATION

Indian Institute of Science Education and Research (IISER) Kolkata
BS-MS Dual Degree in Physical Sciences (Minor in Computer Science)

West Bengal, India
2023 – Present

- CGPA: 8.13 (Current Semester: 6)
- Key Coursework: Classical & Quantum Mechanics, Linear Algebra, Analytical Reasoning, Data structure and Algorithms.

Cooch Behar Rambhola High School
Higher Secondary Education (Class XII)

West Bengal, India
2022 – 2023

- Stream: Science (Physics, Chemistry, Maths, Biology)
- Performance: 92.4% | 99.65 Percentile

TECHNICAL EXPERTISE

Languages	C, C++, Rust, Python, Julia
Scientific Computing	NumPy, SciPy, Matplotlib, MDAnalysis, PyTorch, TensorFlow
Operating Systems	Linux (Arch Linux) (Daily driver, System Administration, Hardware Optimization)
Tools & Dev	Git, LaTeX, Shell Scripting, High-Performance Computing

EXPERIENCE

Summer Intern | mCED Lab, IISER Kolkata

May 2025 – July 2025

Advisor: Dr. Neelanjana Sengupta | Mentor: Mr. Sarbajit Layek

- Computational Biophysics: Focused on calculating biophysical properties of water in the hydration layer using high-frequency molecular simulation trajectories (GROMACS).
- High-Performance Software: Developed and refined custom software in C++ and Python to quantify physical properties including velocity autocorrelation function (VACF), RTCF, P1, and P2.
- Data Analysis: Bridged low-level system control with high-level data analysis to process simulation data efficiently.

RESEARCH INTERESTS

- AI for Science: Applying advance machine learning algorithms to automate scientific discovery and theoretical physics derivation (inspired by tools like AlphaFold).
- Computational Physics: Solving theoretical and applied physical problems by combining logic flow with algorithmic efficiency.