

Sarbajit Sarkar

Physics Major & Computer Science Minor

📍 IISER Kolkata, West Bengal, India ✉ ss23ms097@iiser.ac.in

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.