

Soumyadip Saha

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CAREER OBJECTIVE

Seeking a technical role to leverage my programming, web development, and database skills to design innovative solutions. Eager to contribute my technical and collaborative problem-solving abilities in a forward-thinking environment, driving organizational success and professional growth.

EDUCATION

Bachelor of Technology (B. Tech) - Electronics & Communication Engineering	2021 - 2025
Academy of Technology (MAKAUT)	CGPA: 8.07/10
Senior Secondary (XII), CISCE Science	Percentage: 79.75%

SKILLS

- **Programming Languages:** Python, Java, C
- **Web Development:** HTML5, CSS, JavaScript
- **Database:** MySQL
- **Fundamentals:** Data Structures, Object-Oriented Programming
- **Tools:** Git, GitHub, VS Code, IntelliJ IDEA
- **Soft skills:** Communication, Teamwork, Adaptability, Time Management

PROJECTS

Sorting Algorithm Visualizer | [GitHub Repo](#) | [Live](#)

- Developed a web-based visualization tool using **HTML**, **CSS**, and **JavaScript** that demonstrates more than five sorting algorithms.
- Implemented interactive visualizations showcasing real-time swaps and data movements, enhancing the understanding of algorithm efficiency and performance.
- Integrated user controls for speed and array size to illustrate the impact of input scale on runtime.

Solar Cell Power Output Optimization (Academic Project)

- Developed a **Particle Swarm Optimization (PSO)**-based MPPT algorithm in **Python**, dynamically optimizes voltage to maximize solar power output under varying environmental conditions, resulting in up to **16%** improvement in energy extraction efficiency.
- Visualized results through detailed plots, enabling data-driven analysis.

Hospital Management System | [GitHub Repo](#)

- Built a **Java**-based Hospital Management System incorporating **OOP** principles (encapsulation) to implement a structured, user-friendly workflow for managing hospital records.
- Included features such as patient and doctor record management, as well as appointment scheduling with availability checks.
- Utilized **JDBC** with **MySQL** for database interactions and real-time data handling.

INTERESTS

Chess (strategic thinking) | Photography (attention to details, digital editing)