

TIRTHA BISWAS

Kolkata, West Bengal

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🌐 [tirtha-biswas](#)

🌐 [Portfolio](#)

Education

Jadavpur University, Kolkata

2021-2025 CGPA: 7.3

Bachelor of Engineering (B.E) in Power (Specialization in Electrical) Engineering

Holy Cross School, Kolkata

2020 Score: 84.17%

Class 12 (ISC)

Holy Cross School, Kolkata

2018 Score: 90%

Class 10 (ICSE)

Technical Skills and Frameworks

Programming Languages: C++, JavaScript, Python

Frameworks: React.js, Tailwind CSS, Express.js, Node.js, Flask

Databases: MySQL, MongoDB

CS Fundamentals: DBMS, OOPs

Projects

Code XL (MERN, Redis, Flask, Beautiful Soup) | GitHub | Deployed Link | Video Demo

- Designed a full-stack **MERN** (MongoDB, Express.js, React.js, Node.js) application for placement preparation, implementing **JWT** for robust user authentication.
- Created features for uploading **SDE/DSA practice sheets** in Excel format, enabling users to track progress through **infographics** for performance analysis. Implemented functionality for users to **take and save notes** on specific problems and **mark problems for revision**.
- Architected a **Customized Mock Test Generation** feature for topics including **Operating Systems (OS)**, **Object-Oriented Programming (OOP)**, **Database Management Systems (DBMS)**, and **Aptitude**. Designed a **Core Concepts Archive** feature to help users learn core computer science fundamentals.
- Boosted performance and scalability through **Redis** integration, leveraging **caching** for faster data retrieval and reduced latency, decreasing response time by **91%** for cached data.
- Created and used a **Flask API** with **Beautiful Soup** to scrape and compile data from **Codeforces** and **GeeksforGeeks**, displaying real-time updates on upcoming contests.

BetterMe Healthcare App (React.js, Tailwind CSS, Flask)

GitHub | YouTube

- Led the development of a comprehensive healthcare application using **React.js**, **Tailwind CSS**, and **Flask**, providing users with an intuitive and responsive interface.
- Achieved **99.97% accuracy** in disease prediction by implementing machine learning models, including **Support Vector Machines (SVM)**, **Decision Trees**, and **Random Forests**.
- Integrated **Stripe** for secure payment processing, enabling seamless transactions for services like appointment booking.
- Utilized **Zego Cloud** to implement real-time video calling features, facilitating virtual consultations between doctors and patients.
- Engineered advanced features like **Calorie counting**, **Posture correction**, and **Personalized Diet/Workout plans** using **Langchain** enhancing user engagement and health outcomes.

CompileIt (Node.js, LangChain, LangGraph) | GitHub

- Built an online compiler API with **Node.js** supporting multiple languages with real-time code execution.
- Integrated **LangChain** and **LangGraph** to enable code auto-completion and error correction.
- Implemented a feature that searches YouTube for relevant tutorials and presents them to users for better understanding.

Achievements

- Secured an All India Rank of **2152** in **WBJEE**
- Achieved **5th** place in the Jadavpur University Internship Screening Test (2023-2024) out of **200+** students.
- Ranked 8th among 200+ teams in the Hackforge Hackathon organized by Jadavpur University** at Srijan, the annual tech fest of Jadavpur University, while leading a team of 4 members.
- Reached the highest rating of **1737 (3-star)** on CodeChef.
- Reached the **pupil** on Codeforces (**1276** rated).
- Solved over **800+** problems across various competitive programming platforms.

Profile Links

- [GitHub](#), [LeetCode](#), [Codeforces](#)