

SWAPNANEEL RAY

Kolkata, India

+91 7980515334

neel26ray@gmail.com

LinkedIn

LeetCode

GitHub

Education

Jadavpur University

Oct 2023 – May 2027

Bachelor of Engineering, Information Technology (CGPA: 8.9/10)

Kolkata, West Bengal

- **Core Coursework:** DBMS, Data Structures & Algorithms, Operating Systems, Computer Networks, OOP Concepts.

Work Experience

HireDue

Dec 2025 – Feb 2026

Software Engineering Intern

Remote, India

- Built and enhanced **reusable UI components** for the company's **desktop application and marketing website** using **React**.
- Developed an **end-to-end Generative AI pipeline** leveraging **LLM-based parsing** for structured data extraction, eliminating **60%** of manual data-entry overhead.
- Architected and published an internal **NPM package (80+ downloads)** implementing a **storage abstraction layer**, reducing redundant database calls and improving API performance.

Awards & Achievements

- **Finalist – JP Morgan Code for Good 2025:** Recognized as a finalist for solving real-world business challenges under high-pressure conditions.
- **Knight on LeetCode:** Top **2% worldwide** (1950+ rating), **1000+** problems solved.
- **MLSS Scholar:** Selected for Amazon ML Summer School 2026 . Top **3000** among 11akh+ applicants.
- **3rd Place – Hacktropica 2026 (MLH Hackathon):** Secured 3rd prize at an official Major League Hacking event under competitive constraints.
- **Flipkart GRID Semifinalist:** Selected as a semifinalist in Flipkart GRID.
- **Google Big Code – Round 2 Qualifier:** Advanced to Round 2 against thousands of participants in algorithmic problem-solving.
- **Leadership:** Secretary of the **ACM Student Chapter**, leading the organization of **ACM-ICPC mock contests** and **Synchronicity S2**, the chapter's flagship hackathon.
- **Acedemics:** Top **1%** of 200,000+ candidates in ISC 2023. 98 percentile in JEE Mains. 373 rank in WBJEE.

Projects

Course AI

GitHub Website

- Engineered an **AI-powered** course generation platform using **Next.js**, **LLMs**, and a **RAG pipeline** backed by **MongoDB Vector Search** to generate context-aware educational content from custom knowledge sources.
- Designed an **asynchronous AI workflow** using **BullMQ** and **Redis** for reliable background job execution and scalable processing of long-running generation tasks.
- Implemented secure authentication with **NextAuth** (Google/GitHub), integrated **PDF export** and **text-to-speech** capabilities, and deployed the application on **AWS EC2** with automated **CI/CD** using GitHub Actions.
- **Technologies:** Next.js, MongoDB (Vector Search), BullMQ, Redis, Gemini AI, RAG, AWS EC2, GitHub Actions, NextAuth, Tailwind CSS

BenchMark

GitHub Website

- Built a **microservice-based online benchmarking platform** for evaluating **matching engine implementations**, enabling users to submit code that is securely compiled, executed, and benchmarked against predefined test scenarios and performance metrics such as latency and throughput.
- Implemented an **isolated Docker-based execution environment** with resource limits and automated cleanup for securely running untrusted user code, while streaming execution status and results via **WebSockets**.
- Designed an asynchronous execution pipeline using **BullMQ** and **Redis** for background job processing, and deployed the platform on **AWS EC2** with automated **CI/CD** using GitHub Actions and **GHCR**.
- **Technologies:** Node.js, TypeScript, Docker, Redis, BullMQ, WebSockets, AWS, GitHub Actions, GHCR, Caddy, C++

Technical Skills

- **Languages:** C++, Java, Python, JavaScript, TypeScript, SQL
- **DataBases & ORMs:** MongoDB, MySQL, Redis, Mongoose
- **Frameworks & Libraries:** Next.js, React.js, Node.js, Express, Tailwind CSS, Electron
- **DevOps & Tools:** Git, GitHub Actions (CI/CD), Docker, Render, Vercel, AWS (S3/EC2)