

Mourya Saha

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Education

Jadavpur University, Kolkata

Oct 2023 – present

Bachelor of Engineering in Computer Science and Engineering

CGPA: 8.59 / 10.00

Experience

Software Engineer Intern | *Global Jadavpur University Alumni Foundation*

March 2025 – Present

- Led technical planning for a team of three interns by decomposing platform features into modular deliverables and coordinating feature integration.
- Designed and implemented a scoped multi-tenant architecture (Organization → Courses → Quizzes) enabling organization onboarding and tenant isolation.
- Enhanced the Gmail-based assessment ingestion pipeline by replacing hardcoded sender filtering with dynamic organization discovery, enabling scalable multi-organization support.
- Extended pending invite processing to support Google Sign-In and multiple pending invitations per user, ensuring consistent onboarding across authentication flows.
- Migrated production build and deployment workflows from local environments to GitHub Actions, enabling automated CI/CD for AWS deployments.

Projects

Concurrent Job Queue | *Node.js, PostgreSQL, WebSockets* | [GitHub](#) 📄

- Designed a PostgreSQL-backed concurrent job queue using FOR UPDATE SKIP LOCKED to enable safe parallel job execution across multiple workers.
- Implemented transactional job claiming, retries, and crash recovery to guarantee correctness under concurrent execution.
- Built event-driven real-time status updates using PostgreSQL LISTEN/NOTIFY and WebSockets, eliminating polling overhead.
- Engineered fault-tolerant worker lifecycle management with automatic retry handling and abandoned job recovery.

IndiPostCollect | **Production E-Commerce Platform** | *React, Node.js, Express.js, MongoDB, AWS* | [GitHub](#) 📄

- Scaled a Smart India Hackathon prototype into a production-ready marketplace featuring RBAC, secure authentication, and Stripe payment integration.
- Deployed the platform on AWS EC2 under a custom domain and automated build and deployment workflows using GitHub Actions.
- Implemented JWT authentication using HTTP-only cookies and integrated Cloudinary media storage for secure user-generated content.

Achievements

Smart India Hackathon 2024 Finalist

Dec 2024

Technologies

Languages: C++, JavaScript, TypeScript, Python

Backend: Node.js, Express.js, PostgreSQL, MongoDB, REST APIs, WebSockets

Frontend: React, Next.js, Tailwind CSS

DevOps: AWS EC2, Docker, GitHub Actions, Git