

GOURAB MONDAL

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SUMMARY

Computer Science graduate; Mainly focused on backend development; Exploring Generative AI and System design; Built projects across ML, Agentic AI, backend systems and basic devops; Proficient with subset of modern development tools and technologies.

TECHNICAL SKILLS

- **Languages:** Python, Java, C, Javascript
- **Frameworks & Libraries:** FastAPI, Spring Boot, Express.js, Next.js, React, LangChain
- **Databases:** SQL, MongoDB, Redis
- **Cloud & DevOps:** AWS, GCP, Docker, Kubernetes, Nginx
- **Tools:** Git, GitHub, Claude code, Linux/Bash
- **Software Testing:** Junit/Mockito, Vitest

EXPERIENCE & TRAINING

Cognizant | [Digital Nurture 4.0 Program \(Java FSE Track\)](#) | Jun 2025 – Aug 2025

- Completed 3-month Java Full Stack Engineering training focused on cloud-native microservices and RESTful API design.
- Developed hands-on projects using Spring Boot, Spring Cloud, React, and SQL; implemented unit testing and logging using JUnit 5, Mockito, and SLF4J.

PROJECTS

- **Audio Streaming app** [\[GitHub\]](#): Audio streaming app backend implementation with decoupled adaptive HLS transcoding pipeline using FFmpeg & Docker, storage using AWS S3 and PostgreSQL, outbox queue using BullMQ, Stripe payroll and subscription management, Auth0 and FGA based auth management using Node and TS with Grafana cloud monitoring and tests using Vitest and Supertest.
- **CI/CD Pipeline with OTEL** [\[GitHub\]](#): Deployment pipeline for a full-stack Next.js application with GitHub Actions quality gates for CI, Jenkins-driven CD, Terraform-provisioned AWS infrastructure, blue-green deployments via Nginx, and self-hosted observability using Prometheus, Grafana and Loki on a dedicated monitoring server.
- **Road Distress Diagnostic System** [\[GitHub\]](#) [\[Artifacts\]](#): Async computer vision pipeline for infrastructure maintenance and criticality prioritization; automates damage detection using bounding boxes and severity scoring across road survey inputs using fine-tuned YOLOv8m and data augmentation, custom heuristic based RDI severity scoring mechanism utilizing model output numbers, FastAPI background workers, AWS S3, React Management Dashboard, location pinning using Google Maps API.
- **Document Utility AI Agent** [\[GitHub\]](#): Autonomous agent for document transformations and multi-format document processing from natural language, LLM generated dynamic tasks orchestration using LangGraph and custom set of tools created in MCP using Python, Redis for memory, Celery for background jobs, React based UI, MongoDB for persistence and AWS S3 for artifact storage.
- **Local Secret Sync** [\[GitHub\]](#): A zero-knowledge CLI utility that utilizes Fernet (AES-128-CBC) and PBKDF2-HMAC-SHA256 to locally encrypt and synchronize repository-specific environment (.env) files to cloud storage, leveraging deterministic SHA-1 Git remote URL hashes as secure lookup keys for zero-trust, multi-workspace configuration management.

EDUCATION

B.Tech — Computer Science & Engineering (2022 – 2026)

University of Engineering & Management, Kolkata | CGPA: 8.7

CERTIFICATIONS

- **Google (Coursera):** The Bits and Bytes of Computer Networking [\[Cert\]](#); Introduction to Git and GitHub [\[Cert\]](#)
- **DeepLearning.AI (Coursera):** Neural Networks and Deep Learning [\[Cert\]](#)
- **AWS (Coursera):** Cloud Technical Essentials [\[Cert\]](#)
- **University of London (Coursera):** Cyber Security Fundamentals [\[Cert\]](#)

INTERESTS & LANGUAGES

- **Interests:** Backend Development, Generative AI, System Design, Devops
- **Languages:** English (Fluent), Hindi (Conversational), Bengali (Native)