

# SUBROTO KUMAR

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## Technical Skills

Languages:	Go, Java, Python, JavaScript, TypeScript, Dart, SQL
Backend:	Spring Boot, Express & NestJS, FastAPI, Postgres, MongoDB, Kafka, RabbitMQ, Redis
Cloud/Devops:	Docker, Kubernetes, Nginx, AWS, Microsoft Azure, Jenkins, GitLab, Linux
Gen-AI:	Langchain, Langgraph, RAG, AI Agents, Ollama, Bedrock, Azure OpenAI, Azure AI Search
Framework:	Flutter, React, Angular, Android Studio

## Experience

### Capgemini

March 2024 – Present

Software Engineer

Mumbai

- Developed an Agentic AI **Business Analyst** leveraging **LangChain** and **LangGraph**, enabling autonomous decision-making workflows and generating actionable insights from structured data 3× faster than manual processes.
- Built a high-performance **RAG** backend with **PGVector**, improving vector search latency by **40%** and supporting product features that scaled to **100k+** daily users. Architected efficient data pipelines for vector-based retrieval.
- Engineered and implemented a dedicated **microservice** for **LLM generation**, integrating **Azure OpenAI**, **Amazon Bedrock**, and **Ollama** using **FastAPI**, ensuring extensibility and efficient API handling for multi-LLM support.

### LTI Mindtree

August 2023 – October 2023

Graduate Engineer Trainee Intern

Remote

- Completed an intensive Graduate Engineer Trainee internship at LTI Mindtree, gaining industry-grade expertise in **Java**, **AWS** services (S3, RDS, EC2, IAM, Billing, etc), **Terraform**, Database Management System (DBMS), and **Linux**.
- Concluded Ignite Cloud Technology track with an **86%** score, gaining practical experience in cloud infrastructure and modern deployment tools.

### Ridobiko

November 2022 – April 2023

Flutter Developer Intern

Gurugram

- Took the ownership of integrating **DigiLocker** platform to customer application and leveraged technologies such Flutter, **OAuth2.0**, REST API, resulting in successful implementation of **e-KYC system** for Document verification of users.
- Reduced code bloat and refactored the codebase, resulting in a **20%** increase in app performance, a **15%** reduced application size, improvement in code readability, and maintainability.

## Projects

**Rover: In-Memory Store** | Go, Redis, Concurrency, Data Structures

Github, Dockerhub

- Engineered a high-performance, **RESP-compatible in-memory key-value store**, leveraging Go's powerful concurrency model with **goroutines** to efficiently handle thousands of client connections.
- Designed a lightweight, extensible architecture enabling with multi-database support and 30+ Redis-style data commands. Achieved average GET latency under 1 ms and supported datasets with over 10 million keys.

**Kurumi: Anilist Client** | Dart, Flutter, GraphQL, Riverpod, Ferry

Github, Play Store

- Developed an anime and manga tracker mobile app with **Flutter** that uses **Ferry client** under the hood to utilize a **GraphQL** API and advanced **caching** and data synchronization techniques for up-to-date data delivery.
- Elevated user satisfaction for **8000+** users with a stellar **4.8 / 5 average rating** in Google Play Store.

**Comet: Cryptocurrency wallet** | Flutter, Solidity, Web3Dart, Hardhat, ERC20, ERC721

Github, Play Store

- Crafted a secure Flutter-based cryptocurrency wallet for **Ethereum-compatible** network chains using **web3dart**, ensuring encrypted wallets and smooth **ERC20/NFT** interactions for enhanced functionality.
- Utilized **Hardhat**, **OpenZeppelin**, Alchemy for building features such as **token transfer**, **scan-to-pay** functionality, **ERC20 token** management, and **multi-chain** support for enhancing the versatility and user experience of the app.

## Education

Haldia Institute of Technology

Aug. 2019 – July 2023

B.Tech in Electronic and Communication Engineering — Score: **8.98 CGPA**

Haldia, West Bengal

## Achievements & Certifications

- Microsoft Certified: **Azure AI Engineer Associate certification (AI-102)**.
- Microsoft Certified: **Azure Developer Associate certification (AZ-204)**.
- Microsoft Certified: **Azure Fundamentals certification (AZ-900)**.
- Competed at ETHIndia 2022 & 2023, delivering blockchain prototypes during the world's largest Ethereum hackathon in Bengaluru.