



Sayan Chatterjee

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Summary

A passionate engineer specializing in building scalable solutions across cloud-native, IoT, and AI environments. My experience spans rapid prototyping, hands-on deployment of intelligent systems, and elevating technical standards in dynamic remote teams. I thrive on crafting tools and platforms that drive innovation, enhance efficiency, and empower collaboration. Driven by curiosity and impact, I bring not just technical depth but also a collaborative mindset to every project.

Skills

Languages: Python, C++, Java, C, JS, TypeScript, Dart
Frameworks: Flask, Django, FastAPI, Spring Boot, React, Flutter
Cloud & DevOps: Docker, Kubernetes, AWS, GCP, Azure, Terraform, GitLab CI/CD, Kafka
Databases: PostgreSQL, MySQL, MongoDB, Firebase, Redis, BigQuery
ML/NLP: scikit-learn, pandas, NumPy, Selenium, NLTK, spaCy, TensorFlow (basic)
Tools: Git, REST, WebSocket, OAuth2, Bash, pytest, Jest
OS: Linux (Ubuntu), TrueNAS SCALE, Windows Server

Experience

BlackCoffer (Remote)

Data Scientist Intern Dec 2024 – Mar 2025

- Designed and deployed **BetterQuery**, a GPT-4 driven Flask API assistant generating advanced Elasticsearch queries with Natural Language Querying with real-time feedback and secure, semantic validation.
- Built and automated **AdSense Data Fetcher**, integrating OAuth2 AdSense reports with BigQuery, complete with duplication and resilient ETL scheduling.

Education

Lovely Professional University

B.Tech in Computer Science AUG 2025
Relevant coursework: DSA, ML, OS, DBMS, Cloud, IoT
Capstone: Sentiment Analysis Web App (Flask + Selenium)

Lovely Professional University

Diploma in Computer Science MAY 2022
CGPA: 8.6/10

Projects

github.com/cayanide

Sentiment Analysis Web App

- Built a full-stack sentiment analysis system using Selenium, NLP (spaCy, NLTK), and Naive Bayes Model.
- Visualized sentiment trends and deployed with Flask and Docker using CI/CD pipelines.

BetterQuery: AI Search Assistant

- Created a GPT-4 powered assistant to generate semantic Elasticsearch queries via Flask API.
- Implemented query sanitization, feedback refinement, and automated index selection, enabling natural language querying.

AdSense Data Fetcher

- Automated OAuth2-based retrieval of AdSense reports and ingestion into BigQuery.
- Added duplication logic and retry handling for robust ETL scheduling.

Anime Recommendation System

- Designed a JWT-secured REST API using Flask and PostgreSQL, fetching metadata via AniList GraphQL.
- Built a Dockerized microservice with modular components and structured logging.

Certifications

Azure Security Engineer (AZ500)– Microsoft	Apr 2025
Microservices & Serverless – IBM	Jul 2024
DSA – GeeksforGeeks	Jul 2024
Kubernetes & Docker – IBM	Jun 2024
Spring Cloud – Coursera	Jun 2024
ML – IIT Bombay	Mar 2023
Theory of Computation – Udemy	Nov 2023

Interests

Home-lab tinkering (Nextcloud, Jellyfin, Pi-hole), algorithm challenges, open-source contributions, and tech blogging. Passionate about IoT, cloud-native infrastructure, and ethical AI.

For a deeper look at my work, visit my portfolio: cayanide.github.io/resume.