

Dipto Bhattacharjee

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EXPERIENCE

KOOLIO.AI | SOFTWARE ENGINEER

April, 2023 – Present | Remote

- Led backend development & cloud infrastructure (AWS/GCP) for a production app with 10+ core features.
- Implemented Google OAuth 2.0, Apple SSO & Facebook SSO for secure authentication, boosting user sign-ups by 47%.
- Designed & implemented Stripe subscription system (incl. trials) in production for smooth transactions.
- Architected scalable system design & microservices ensuring high availability, reliability & performance & low latency.
- Migrated ML workloads from AWS EC2 -> ECS, cutting infrastructure costs by 40%.
- Automated deployments with CI/CD pipelines (GitHub Actions, Docker, Cloud Build) enabling zero-downtime deployments.
- Built real-time collaboration features (WebSockets -> Socket.IO) with Redis, scaling from MVP to thousands of concurrent sessions.
- Developed LiveKit-based AI Voice Agent system supporting multi-user audio rooms with live transcription & recording, designed for scalable real-time collaboration.
- Revamped audio editing features & processing flows, delivering a 66.7% increase in performance efficiency.
- Streamlined PostgreSQL & NoSQL (Redis, AWS DynamoDB, GCP Firestore) on AWS/GCP, reducing storage 35% & latency 50%.
- Implemented automated RSS feed publishing for podcasts to streamline content distribution.
- Resolved 100+ critical backend production issues, improving system stability, security & reducing average incident response time by 50%.

BASEL PRACTITIONERS | TECHNICAL DEVELOPER INTERN

December, 2022 – May, 2023 | Remote

- Delivered interactive forecasting dashboards via AWS QuickSight, S3 & Athena for data-driven insights.
- Architected scalable backend on Spring Boot & database schemas with MySQL, ensuring maintainability & efficient data flows.
- Optimized database performance, improving query execution & reducing latency by 50%.

PROJECTS

COLLABORATIVE NOTES APP (GITHUB LINK)

- Event-driven collaborative notes app with real-time sync, built in Python(FastAPI, Socket.IO & Redis); containerized with Docker, deployed via Docker Compose & extended to Kubernetes (Minikube) with Kompose generated configs.

CRYPTO-COMPRESS PIPELINE (GITHUB LINK)

- High-performance Enigma encryption + Huffman compression tool built with Java.

BOOK INVENTORY MANAGEMENT APP (GITHUB LINK)

- Book Inventory Management System built with MERN stack.

SKILLS

PROGRAMMING & BACKEND

- Python (Flask, FastAPI, Django)
- Java (Spring Boot)
- Node.js (Express.js, Axios) • TypeScript
- REST APIs • GraphQL • gRPC • tRPC
- SQL (PostgreSQL, MySQL, MariaDB)
- NoSQL (DynamoDB, Firestore, MongoDB) • Caching (Redis, ElastiCache, MemoryStore, Memcached) • C • C++
- Go • Kotlin

CLOUD & DEVOPS

- AWS • GCP • Docker • Podman
- Docker Compose • Podman Compose
- CI/CD (GitHub Actions, GitLab CI)
- Cloud Build • CloudFormation
- Amplify • Firebase • Buildpacks
- Monitoring (CloudWatch)

SYSTEM DESIGN & ARCHITECTURE

- Microservices Architecture
- Scalable Distributed Systems
- Stripe Payments
- AI Voice Agents (LiveKit)
- Real-Time Collaboration (WebSockets, Socket.IO) • Authentication & Authorization (OAuth 2.0, Apple SSO, Facebook SSO)

TOOLS & PLATFORMS

- Git • GitHub • GitLab • Bash
- Maven • uv • npm
- Nginx • Linux • Postman

CURRENTLY LEARNING

- Kubernetes • Rust • Terraform

EDUCATION

GOVERNMENT COLLEGE OF ENGINEERING AND CERAMIC TECHNOLOGY

BACHELOR OF TECHNOLOGY IN
COMPUTER SCIENCE AND
ENGINEERING

2020 - 2024

Kolkata, West Bengal, India

Cum. GPA: 9.79 / 10.0