Dipto Bhattacharjee

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EXPERIENCE

KOOLIO.AI | Software Engineer
April, 2023 – Present | Remote

- **Led** backend development and cloud infrastructure **(AWS/GCP)** for a production web app with **10+ core features** used by **100+ users**, while **managing a team of 5 to 7 developers**, owning the **system architecture** and **ensuring on-time cross-stack delivery** in a **fast-paced startup**.
- Implemented **Google OAuth 2.0**, **Apple SSO** and **Stripe subscriptions** (incl. trial), **boosting sign-ups by 30%** ensuring smooth transactions.
- Architected **real-time collaboration** via **LiveKit** and **Socket.IO**, implemented **core editing features** and **RSS feed publishing for podcasts**, and **optimized audio processing flows** for performance, **ensuring 99.99% uptime**.
- **Integrated** AI/ML services **(ChatGPT, MusicGen, DALL·E·2)** for features like **audio generation**, **summarization** and **noise removal**.
- **Migrated** ML workloads from **EC2** to **ECS**, **reducing infrastructure costs by 40%**, and **deployed** multiple sites with **automated CI/CD** and **optimized delivery**.
- **Containerized** and **deployed 10+ microservices** using **Docker**, managed via **ECS**, **EKS**, and **GKE**.
- **Maintained CI/CD pipelines (GitHub Actions, Cloud Build, S3/CloudFront)** for **Zero-Downtime deployments**.
- **Resolved 100+ backend and several frontend production issues**, **improving stability**, **security** and **AI-driven user experience**.
- **Optimized database schema** and large datasets (music/SFX), **reducing storage by 35%, latency by 50%** and **improving response time by 30%**.

BASEL PRACTITIONERS | Technical Developer Intern
December, 2022 – May, 2023 | Remote

- **Architected backend** and **database schema** for the **Due Diligence microservice** in a **Credit Risk Management Framework**.
- **Optimized database queries** and **enhanced data fetching** and **processing algorithms**, **reducing latency by 50%**.
- **Worked** on **data forecasting** and **prediction** microservice by **integrating model outputs** with **AWS QuickSight** via **S3** and **Athena** and **visualized dynamic insights** through **interactive dashboards**.
- **Built** and **integrated** frontend features using **React**, **Axios** and **Redux**; focused on **functional development** and **efficient state management** with **React Hooks** while **connecting APIs between frontend and backend**.

PROJECTS

COLLABORATIVE NOTES APP (GitHub Link)
- Event-driven collaborative notes app with real-time sync.

BOOK INVENTORY MANAGEMENT APP (GitHub Link)
- MERN-based book inventory management system.

CRYPTO-COMPRESS PIPELINE (GitHub Link)
- Encrypted text compressor with Enigma and Huffman.

SKILLS

PROGRAMMING
- Python • Java
- TypeScript • JavaScript
- SQL • Go • Kotlin
- C • C++

BACKEND
- Spring Boot • Node.js • Express.js
- Flask • FastAPI • Django • Django REST
- RESTful APIs • Socket.IO
- GraphQL • gRPC • tRPC
- Stripe API (Payments) • OAuth 2.0

DATABASE
- AWS DynamoDB • GCP Firestore
- PostgreSQL • MongoDB • MySQL
- MariaDB • Redis • SQLite3 • Prisma

CLOUD AND DEVOPS
- AWS • GCP
- Buildpacks • Docker
- Docker Compose • GitHub Actions
- GCP Cloud Build
- AWS CloudFormation

ML / AI INTEGRATION
- LiveKit (AI Voice Agents)
- ChatGPT • SpeechBrain
- AudioGen • MusicGen
- Kandinsky • DALL·E·2
- Stable Diffusion • Replicate

FRONTEND
- React.js • Redux • Tailwind CSS
- Next.js • Axios • HTML5 • CSS3

TOOLS AND PLATFORMS
- Linux • Nginx • Git • GitHub
- AWS CLI • GCloud CLI
- Maven • UV • NPM
- Postman • cURL • HTTPie

CURRENTLY LEARNING
- Terraform • Kubernetes • Rust

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