

# Keith Chew Zikai

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## About Me

Early-career professional with experience in AI, Software, and Cloud Engineering through MSD's rotation programme. Focused on building strong technical foundations, with a drive for continuous learning and growth in the tech space.

## Experience

### AI Engineer @ MSD

07/2024 - Present

- Developed a RAG system leveraging various internal data sources, enhancing prompt contextualization and knowledge retrieval capabilities
- Optimized development workflow efficiency by implementing CI/CD pipelines with automated unit testing, vulnerability scanning and EKS deployment.
- Designed and implemented LLM tool call orchestration framework enabling integration of web search, document retrieval, image ingestion and generation capabilities in a unified chat interface.
- **Skills:** AWS, CI/CD, Docker, FastAPI, GitHub Actions, Kubernetes, LLMs, PostgreSQL, Prompt Engineering, Python, RAG

### Software Engineer @ MSD

01/2024 - 06/2024

- Developed enterprise URL management platform with Next.js, TypeScript and AWS, reducing link management overhead
- Prototyped a leadership development mobile app using React Native, securing approval after successful POC delivery in 2 months
- Conducted user interviews and translated findings into prioritized feature requests, increasing user adoption
- **Skills:** AWS, Next.js, Product Discovery, React Native, TypeScript

### Cloud Engineer @ MSD

07/2023 - 12/2023

- Designed architectures supporting cost allocation for cloud-hosted company applications
- Transitioned cloud resources to Terraform, reducing deployment errors and enabling IaC best practices
- **Skills:** AWS, Solution Architecture, SQL, Terraform

## Education

### National University of Singapore (NUS)

Singapore

B.Sc. in Computational Biology

08/2019 - 05/2023

- **Skills:** AI/ML, Big Data, Bioinformatics, Data Science, Databases, NLP

## Certifications

- AWS Certified Cloud Practitioner
- AWS Cloud Quest: Solutions Architect
- Kubernetes and Cloud Native Associate (KCNA)

## Side Projects

### MedisimAI

<https://medisim-ai.vercel.app>

- Developed an AI-powered doctor-patient simulator for medical students, replacing peer role-play with automated dialogue
- Currently developing v2 with Node.js frontend and Python backend for improved scalability
- **Skills:** LLMs, Next.js, Prompt Engineering, Vercel

### Portfolio Website

<https://kipps.github.io/heyitskeith>

- **Skills:** React.js, TailwindCSS, TypeScript