

Francis Mungai

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Summary

Full-stack developer with hands-on experience building responsive front-ends and scalable back-end systems from concept to deployment. Proven ability to enhance API performance, reduce deployment times, and ship high-quality mobile/web products. Expertise in client-side and server-side development, cloud architecture, and containerization, focusing on delivering reliable, scalable, and maintainable solutions.

Education

Case Western Reserve University, Cleveland, OH

Aug 2020 – Dec 2024

BS in Computer Science

Relevant Coursework: Data Structures, Databases, Machine Learning, Web Development, Software Craftsmanship

Experience

Full-stack Developer, MedVic

Sep 2024 – Present

- Designed and developed a mobile-first platform for hospital shifts and volunteering using Expo React Native and React, ensuring a consistent and accessible cross-platform UI.
- Built backend infrastructure on Supabase with PostgreSQL, optimizing complex queries and reducing average latency from 200ms to 100ms.
- Implemented caching on high-traffic endpoints, doubling API throughput under load testing scenarios.
- Designed shift-claim logic with row-level access control and server-side validations, ensuring reliable booking flow under peak load without conflicts.
- Automated CI/CD pipelines with GitHub Actions, cutting deployment time by 40% and improving release reliability.
- Instrumented logging and real-time monitoring via Supabase logs, cutting mean time to resolution by 50%.

Full-stack Developer, Tu-Fund

May 2023 – May 2025

- Led the frontend implementation using Next.js and Tailwind CSS, translating Figma prototypes into responsive, accessible UIs.
- Integrated Stripe for secure payment processing and automated disbursements in compliance with PCI standards.
- Built scalable backend services on AWS (EC2, Lambda, DynamoDB), maintaining 99.9% uptime for the donation and talent modules.
- Configured PM2 and NGINX for Node.js process and traffic management, boosting request-handling capacity by 30% under peak traffic.
- Developed CI/CD pipelines with GitHub Actions for automated testing and blue-green deployments, reducing release cycle time by 35%.

Projects

Urban Discovery System (UDS)

github.com/mjk257/uds

- Built a real-time data explorer using Mapbox and React to visualize livability metrics across 50+ U.S. cities.
- Developed backend APIs with Node.js and PostgreSQL, handling 10k+ concurrent queries with 99.8% uptime.
- Containerized and deployed using Docker on AWS EC2, reducing provisioning time from hours to under 15 minutes.

Skills

Frontend: React, Next.js, Expo React Native, Tailwind CSS, Figma

Backend: Node.js, PostgreSQL, MongoDB, AWS, REST APIs

DevOps: GitHub Actions, Docker, NGINX, PM2, AWS (EC2, S3, DynamoDB)

Languages: TypeScript, JavaScript, Java, Python, SQL, Rust