

Karl Fernandes

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TECHNICAL SKILLS

Languages/Frameworks: Java, Python, C, Haskell, SQL (Postgres), JavaScript, TypeScript, HTML/CSS, React, React Native, Next.js, Node.js, Django, FastAPI, REST APIs, Tailwind CSS, Material-UI, Firebase, Supabase
AI/Automation: OpenAI, Gemini, Prompt Engineering, Twilio, WebSockets, Selenium, Web Scraping
DevOps/Tools: Git, AWS, Google Cloud Platform, Vercel, CI/CD (GitHub Actions), VS Code, PyCharm, IntelliJ, GoLand, Maven, PowerShell

EDUCATION

University of Bristol Aug. 2023 – Present
BSc Computer Science – Bristol Plus Award Bristol, UK

EXPERIENCE

AI Automation Developer May 2025 – Jul. 2025
Fiftyminds (Remote)

- Built an AI voice assistant using **Twilio**, **OpenAI**, and **FastAPI** to handle real-time outreach calls.
- Used concurrent processing to scale multiple call sessions; parsed CSV leads via Microsoft Graph API.
- Automated calls and lead logging into **Zoho CRM**, reducing manual follow-up work.

Software Engineer Intern May 2025 – Present
Trackr (Remote)

- Refactored job scraping system using **Selenium** and migrated the pipeline to **AWS**.
- Automated detection of job removals and added support for new platforms.
- Developed a new career paths page using **Angular** to enhance site usability.

Software Engineer Intern Jun. 2024 – Sep. 2024
Y Entertainment (Remote)

- Created an internal interactive website using **HTML** and **JavaScript**.
- Worked across the stack to support early-stage tooling and internal infrastructure.

PROJECTS

CleverCards | *Next.js, React, Firebase, OpenAI, Clerk, Stripe* Aug. 2024

- Built a dynamic flashcard SaaS app using **Next.js** and **React** with an intuitive user experience.
- Integrated **OpenAI** to auto-generate personalized flashcards from user input.
- Implemented secure auth and payment flow using **Clerk** and **Stripe**.
- Deployed backend services with **Firebase** for real-time sync and scalability.

Menstrual Health App | *Django, React Native, Expo, AWS, PostgreSQL* Sep. 2024 – May. 2025

- Developed a mobile app to educate adolescents on menstrual health using cycle-season metaphors.
- Built a **Django + PostgreSQL** backend with JWT authentication and cross-device data access.
- Implemented ring-based cycle visualization and a predictive graphing feature.
- Deployed the system on **AWS** and enforced quality using **Pylint CI**.

Scotland Yard AI Game | *Java, OOP, Game Dev* Mar. 2024 – Apr. 2024

- Cloned the Scotland Yard board game in **Java** with detective logic and an AI-powered Mr. X.
- Used search-based movement strategies and OOP design for scalable and modular gameplay.