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
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EXPERIENCE

Software Engineer Intern   Jun. 2024 – Sept. 2024
Y Entertainment   *Remote*
- Developed an interactive website for company.
- Handled front-end and back-end development using HTML and JavaScript

Software Engineer Intern   May 2025 – Present
Trackr   *Remote*
- Refactored the job scraping system to efficiently use **Selenium**, reducing runtime and increasing job posting accuracy.
- Migrated scraping pipeline to **AWS**, fully automating job detection and email notifications.
- Built new features including **job removal detection** and support for additional companies.
- Developed a **career paths page** using **Angular**, improving user engagement and site navigation.

AI Automation Developer   May 2025 – July 2025
Fiftyminds   *Remote*
- Built an **AI voice assistant** using **Twilio**, **OpenAI**, and **FastAPI** to conduct real-time outreach calls.
- Used **concurrent processing** to handle multiple outreach calls in parallel, improving throughput and reliability.
- Integrated with **Microsoft Graph API** to read emails and extract potential leads from incoming **CSV attachments**.
- Automated personalised calls to leads and offered a gold investment guide; responses logged into **Zoho CRM**.

EDUCATION

University of Bristol   Aug. 2023 – Present
Bachelor of Science in Computer Science - Achieved Bristol Plus Award   *Bristol, UK*

PROJECTS

CleverCards | *Next.js, React, Firebase, OpenAI, Clerk, Stripe*   Aug. 2024
- Built a dynamic flashcard SaaS application using **Next.js** and **React** for an intuitive user experience.
- Leveraged **OpenAI** to automatically create flashcards, providing users with tailored learning tools.
- Enabled secure user authentication and subscription management through **Clerk** and **Stripe** integration.
- Deployed and managed backend services on **Firebase**, ensuring scalability and real-time performance.

ScotlandYard Clone | *Java, Debugging, AI, GitHub, Data Structures, Maven*   Mar. 2024 - Apr. 2024
- Collaborated on developing a **Scotland Yard** board game clone in **Java**, implementing core game mechanics and rules.
- Designed and developed an **AI player** that intelligently mimics the behavior of Mr. X, challenging human players with strategic moves and decisions.
- Utilized **Object-Oriented Design** principles to create a modular and maintainable codebase, facilitating future enhancements and AI improvements.
- Implemented a user interface allowing players to interact with the game, visualize moves, and track the progress of detectives.
- Conducted extensive testing and optimization to ensure smooth gameplay and realistic AI behavior.