Godsfavour Kio

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PROFESSIONAL SUMMARY

- Recent **M.Math in Computer Science** graduate from the **University of Waterloo** (Jan 2025) with **2 years of experience** as a **Mobile Software Engineer**. While working on my thesis, I also completed **four TA terms** for mobile development courses, reinforcing my expertise in native and cross-platform development, full-stack systems, and AI-powered applications. Proficient in **Flutter, Jetpack Compose and SwiftUI**. Seeking full-time opportunities.

EDUCATION

- **University of Waterloo** — Waterloo, ON
  Master of Mathematics in Computer Science. CGPA: 94.75% — *May. 2023 – Dec. 2024*

- **Valley View University** — Accra, Ghana
  Bachelor of Science in Computer Science — *Sep. 2017 – Dec. 2021*

EXPERIENCE

- **University of Waterloo** — Waterloo, ON
  Graduate Research Assistant — *May 2023 - Jan 2025*
  - **AI Agent Benchmarking and Software Evaluation**: Led a research project to create a private benchmark and evaluation pipeline for AI agents in software engineering. The framework enables contamination-free evaluation of AI agents, providing researchers with a way test their AI agents without direct dataset access.
  - **Innovative Data Curation and Benchmarking**: Curated a dataset of **457** task instances from 3 popular GitHub repositories, refining it to a competitive subset of 300 tasks to rival SWE-Bench Lite. This benchmark serves as a unique standard for assessing AI performance on real-world software engineering tasks.
  - **Automation of Testing Pipelines**: Developed an automated evaluation pipeline in **Python** that replicates and extends the SWE-Bench workflow. Leveraging **Docker** and **Python**, this infrastructure reduces manual setup time by 50% and ensures consistent, reproducible evaluation of AI agents, such as SWE-Agent and ACR using **GPT-4o.**

- **University of Waterloo** — Waterloo, ON
  Teaching Assistant in CS — *May 2023 - Dec 2024*
  - **CS 446 - Software Design and Architecture**: Assisted students with software design principles, architectural patterns, and project development. Provided debugging support for Jetpack Compose and Android-related issues.
  - **CS 346 - Application Development**: Guided **48** students in native Android development using Kotlin and Jetpack Compose. Assisted in building real-world mobile applications and troubleshooting issues. Took on the role of Project Manager for final group projects, ensuring smooth execution and technical mentorship.

- **Nsano Ltd** — North Legon, Ghana
  Software Engineer - Mobile — *Mar 2022 – Apr 2023*
  - **Pamo v2 App (Flutter)**: Spearheaded the development of Pamo v2, a mobile commerce platform built with Flutter that **scaled to over 100k downloads in its first year.** Implemented MVVM architecture with Provider for efficient state management, ensuring seamless UI updates and data consistency.
  - **RESTful API Integration**: Integrated RESTful APIs using Dart in close collaboration with backend engineers, significantly improving the app's performance and reliability. Delivered a seamless and responsive user experience across devices by working closely with UI/UX designers.
  - **Pamo Delivery App (Flutter with Google Maps API)**: Led the development of an internal delivery app using Flutter, leveraging Google Maps API for real-time tracking and route optimization. Enhanced delivery operations through advanced location services and backend synchronization, ensuring high performance and minimal downtime. Implemented platform channels to integrate native features like push notifications, improving cross-platform functionality.

- **Valley View University** — Oyibi-Accra, Ghana
  Software Engineer Intern - Full-Stack — *May 2021 - Aug 2021*

- **Full-Stack Web Development with ASP.NET Core and React**: Developed and maintained web applications using **ASP.NET Core** and **React JS**, applying MVC principles to build scalable and responsive full-stack solutions. Enhanced university web services accessed by over **3,000** students.
- **API Development and Integration**: Designed and implemented new RESTful APIs with **ASP.NET Core**, enabling seamless data interactions for university web applications. These APIs supported thousands of daily requests, improving system efficiency and user experience by 25%.
- **Database Design and Testing**: Translated user requirements into Entity-Relationship Diagrams (ERDs) to assist senior developers in database creation. Conducted rigorous testing of new website features, reducing bugs and errors by 30% through detailed validation and debugging.

PROJECTS

- **VVUSA (Valley View University Student Life App)**: Developed a feature-rich Android application to enhance student life at Valley View University, benefiting over 3,000 students. Engineered a mobile-first campus management system and virtual marketplace using Kotlin, Jetpack Compose, and Firebase, streamlining campus services by 30%. Integrated QR code generation for seamless event access. Leveraged MVVM architecture and Coroutines for scalable, maintainable code. An earlier version, built with Java, XML, and RecyclerViews is available here.
- **TaleGarden (In Progress)**: Architected a sophisticated **Android e-reading application** that empowers newer authors to publish and readers to discover books. Implemented with **Kotlin, Jetpack Compose**, and **clean MVVM architecture** using **Dagger Hilt** for dependency injection. Engineered a **multi-step book publishing flow** and an **immersive reading experience** with **Spotify integration** for background soundtracks. Developed robust **backend interactions** using **Supabase with PostgreSQL**, leveraging **coroutines and Flow** for reactive data handling. **Optimized performance** with efficient **file handling** for **PDFs and images** while maintaining a modern **Material 3 UI design** and **full dark mode support**.

TECHNICAL SKILLS

- **Languages:** Dart, Kotlin, Swift, Python, Java, JavaScript, TypeScript, C#; **Frameworks:** Flutter, Jetpack Compose, SwiftUI, Next.js, Bootstrap, Tailwind, ExpressJS, ASP.Net

- **Technologies:** Android Studio, Xcode, VS Code, Node.js, Git, Firebase, Supabase, SQL, Docker

LEADERSHIP & EXTRACURRICULAR ACTIVITIES

- **Valley View University**   Ghana
  President, Computing Science Students' Association (CoSSA)   *Fall 2020 – Spring 2021*
  - **Team Leadership**: Organized and led a team of 15 members to plan and execute tech seminars and workshops, increasing student participation by 50%.
  - **Hackathon Founder**: Founded and organized the inaugural Valley View University Technology Innovation Challenge, a hackathon themed 'Solving Global Problems Using Technology.' Challenged students to build systems that address real-world issues, with 10 participants in various disciplines. YouTube Link
  - **Industry Collaboration**: Facilitated collaboration with industry professionals for guest lectures, enhancing networking opportunities for students.