Alain Ballen

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GitHub | LinkedIn | Personal Website

WORK EXPERIENCE

Software Developer *Dec 2024 - Present*

Intelligent Innovations Lab | Peterborough, ON

- Led 5 developers to build a scalable Android application which democratizes access to healthcare, achieving a 45% increase in user satisfaction during the prototype phase by implementing end-to-end full-stack development using the MVVM architecture
- Designed and implemented scalable database schemas for modeling 4 unique types of user models in Firestore
- Architected a secure document uploading pipeline using Google Cloud Functions and Node.js to handle sensitive data, implementing encryption and access controls to reduce processing time by 30% and a modular design for maintainability

Founding Software Engineer *May 2024 - Sep 2024*

rout3 | Toronto, ON

- Co-founded a startup to empower developers by streamlining access to 25+ Large Language Models (LLMs) through a low-code solution
- Shipped the core product LLM Proxy, achieving a 33% reduction in LLM usage cost through prompt routing/classification
- Developed a user-friendly visualization tool using FastAPI and Svelte, integrating it with the core product to enhance data insights based on user feedback
- Created the testing pipeline using GitHub Actions to automate integration and unit tests

Software Engineer Intern *Sep 2021 - Sep 2022*

Nuula | Toronto, ON

- Collaborated in a cross-functional team to develop a mobile "super app" providing financial services to small businesses across 400+ industries using Java, Spring Boot, and React
- Achieved a 29% reduction in resolution times by implementing a structured and encrypted logging system enabling efficient debugging and storing of 80% error logs in a PostgreSQL database
- Automated UI tests and created test scenarios for 4 core features by gathering feedback from developers, product designers, and QA, reducing pre-release testing effort by 30%
- Created robust REST API endpoints with informative error handling, reducing error response rates by 23%

PROJECTS

Pillminder 🔗 | Node.js, React, Firebase

- A web and Android application built with Google's Cloud Vision API and Twilio API for managing prescription medication. Collaborated in a team of 4 to gather requirements, design a maintainable system, and test the prototype in a fast-paced 24-hour hackathon

Venngram 🔗 | JavaFX, CircleCI, Gradle, JUnit

- A Venn Diagram application supporting a custom file format system with unit tests achieving a high-test coverage of 82% and an automated build process with Gradle

EDUCATION

Bachelor of Engineering (B.Eng), Software Engineering *2024*

York University | Toronto, ON

- Data Structures & Algorithms, Database Systems, Object Oriented Programming, Software Testing, Mobile Development

TECHNICAL SKILLS

Languages: Java, Python, Kotlin (learning), SQL

Tools/Frameworks: React.js/React Native, Flutter, Node.js , PostgreSQL, Postman, Git, Gradle, GitHub Actions, Jira, Postman, Selenium, Appium, TestNG, JUnit, pytest, Android Studio

Cloud Services: AWS (learning), GCP (Cloud Functions, Firebase)

Other: Team Player, Adaptibility, Detail-oriented, Refactoring/Debugging Legacy Codebases, Software Testing, Code Reviews, REST API Development, Integration Testing, Agile/Scrum, MVVM Architecture, Mobile Development