VISHNU SIMHA DUSSA
SOFTWARE ENGINEER
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Professional Summary

Software Engineer with 3+ years of experience in Android development (Kotlin & Java), cloud-native solutions, and microservices using Spring Boot. Adept at designing scalable, secure, and high-performance applications while optimising user experience. Proficient in Agile methodologies (Scrum, SAFe) and collaborating with cross-functional teams. Passionate about leveraging modern technologies to build privacy-focused mobile applications.

Technical Skills

‣ **Programming & Scripting:** Kotlin**,** Java, SQL, C++
‣ **Android**: Jetpack Compose, Retrofit, OkHttp, Room, Hilt, Coroutines, Flows, Pagination, Glide, Firebase, ADB, RX Java, GraphQL
‣ **DevOps & Cloud:** CI/CD, AWS, Docker, Kubernetes, Tomcat
‣ **Backend Development:** Spring Boot, Microservices, HTML/CSS
‣ **IoT -** Raspberry Pi, Arduino, MQTT, ThingSpeak, Python Flask
‣ **Linux** - CI/CD automation and IoT tasks
‣ **Development Methodologies:** Agile (Scrum, SAFe), MVVM, Spring MVC
‣ **Platforms -** Android Studio, IntelliJ IDEA, Zeplin, Figma, Visual Studio
‣ **Build and Automation -** Maven, Gradle, Jenkins, SonarQube
‣ **Version Control -** Git, Bitbucket, and Sourcetree

Certifications

‣ **AWS Certified Solution Architect - Associate:**
• Proficient in designing secure, scalable, and resilient cloud architectures
‣ **AWS Certified Cloud Practitioner**
‣ **Kubernetes** (Udemy)
‣ **Docker** for Java Developers
‣ Spring Boot (TDD, Security, Spring Data)
‣ SQL (HackerRank)

Work Experience

HID Global - Software Engineer - April 2019 - August 2022

Promotions: Advanced from **Industrial Trainee** to **Associate Software Engineer**, and later to **Software Engineer**.

Key Responsibilities and Tasks Performed

‣ Developed a **HID Mobile Access** app from scratch using **MVVM** architecture and SOLID principles, enabling secure credential provisioning and access control via **NFC/BLE** communication with **HID hardware readers** for mobile devices, contributing to the **R&D** of **physical access control systems**.
‣ Led UI development using **XML** and **Jetpack Compose**, designing key screens and enhancing UX for seamless operator-driven and self-service workflows.
‣ **Modernised legacy codebases** by migrating Java modules to Kotlin, reducing code duplication by 40% and improving maintainability for long-term scalability.
‣ Integrated **REST APIs** with Coroutines, Retrofit, OkHttp, and Room, enabling seamless data interactions.
‣ Collaborated with **backend teams** and integrated **GraphQL APIs** for user profile, optimising data retrieval and reducing network overhead.
‣ Optimised **app performance** with profiling tools, reducing app load times by 30%.
‣ Implemented unit and UI **tests** using JUnit, Mockito, Robolectric, and Espresso, achieving **80%+ code coverage**, reducing regression bugs by 25%, and streamlined QA efforts to accelerate release timelines.
‣ **Designed CI/CD pipelines with Jenkins and SonarQube**, enforcing quality gates that reduced post-release defects by 25% and ensured compliance with enterprise security standards.
‣ **Strengthened app security** by implementing code obfuscation (**Dexguard**) and automated AAR testing, ensuring compliance with enterprise security standards.
‣ Resolved customer issues on **ServiceNow** by conducting root cause analysis and debugging across Android versions, improving app reliability.
‣ Operated within a **SAFe Agile** environment, handling the entire **SDLC** from requirement analysis to deployment.
‣ Awarded twice with **Spot Awards** for outstanding performance and QA support.

Project Management and Collaboration:

‣ **Led Agile processes** as Scrum Master, facilitating ceremonies (sprint planning, retrospectives) and collaborating with cross-functional teams (PMs, BAs, UI/UX) to align priorities, estimate efforts, and streamline delivery.
‣ **Optimised release cycles** by documenting processes, maintaining organisational wiki for release notes, and reducing deployment friction through clear guidelines.
‣ **Drove IoT/Mobile guild contributions** via knowledge-sharing sessions and hands-on feature execution, fostering cross-team innovation.

Bonus Technical Skills | Spring Boot:

‣ **Designed and deployed full-stack web applications** using Spring Boot, MVC architecture, and Java/J2EE, integrating RESTful APIs with MySQL/PostgreSQL databases for microservices.
‣ **Secured applications** with Spring Security and Dependency Injection, ensuring robust authentication and authorisation for Android app integrations.

Education

Dublin City University - <u>MSc in Electronic and Computer Technology (Major in IoT)</u> - Sept 2022 - Aug 2023

• Graduated with **2:1** (2nd Class Honours Grade 1)

SRM University - B Tech in Electronics and Communication Engineering - May 2015 - April 2019

• Graduated with **1:1** (83.99%)

Internships

Mobile Testing Robotic Arm - IoT Project - HID Global - April 2019 - September 2019

Business problem: Testing mobile gestures in **HID** Mobile Access application like **BLE Twist and Tap** requires a manual effort and is time-consuming.

Solution provided: Developed an automated robotic arm to test mobile gestures (e.g., BLE Twist, Tap) with Arduino, and Node-RED, solving a manual and time-consuming testing problem for the QA team. This solution reduced testing time by 50%.

Technologies: *Arduino, C++, Node-Red, Java, JavaScript, hardware (Stepper motors, servo motors, sensors)*

Industrial Battery Division - Amara Raja Batteries

I observed the entire lead-acid battery production process, from oxide preparation and grid casting to battery assembly. This experience provided valuable insights into electrochemical energy storage and manufacturing techniques.

Projects - <u>Github Repositories</u>

HID Global - <u>HID Mobile Access</u>

Contributed to the development and maintenance of HID Mobile Access, including the app, SDK, and Android watch features. Managed tasks and effort estimation in JIRA, collaborated with a cross-functional agile team, and worked on both sprint stories and customer issues.

Technologies: *Kotlin, Java, Jetpack Compose, XML, Material Design Components, Navigation, State Management, Retrofit, Room, Hilt, DataStore, Firebase, Coroutines.*

Intelligent Indoor Air Quality Monitoring System - Masters Project in IoT

Designed and implemented an IoT-based Indoor Air Quality Monitoring System using Raspberry Pi and Adafruit SCD40 Sensor. Monitored CO_2 levels, humidity, and temperature for automated vent control and optimal air quality. Developed an Android app for real-time data visualisation and alerts. Conducted comparative analysis to improve system efficiency.

Technologies: *Python Flask, Raspberry Pi, Linux, Edge computing, Data collection and Analysis, Cloud Storage.*

<u>StocKeeper</u> - Android Stock Management App - 2024

Developed an app for efficient inventory management in homes and businesses. Features include real-time stock tracking, customisable alerts, and purchase optimisation.

Technologies: *Kotlin, Jetpack Compose, Retrofit, Hilt, Firebase, Coroutines.*

Feature-Rich Android Applications <u>(Kotlin & Jetpack Compose)</u> , <u>(Kotlin & XML Views)</u> - 2024

Created feature-rich Android applications using Kotlin and Jetpack Compose/XML to showcase my proficiency in implementing the latest technologies. Implemented advanced technologies including Retrofit, OkHttp, Room, Hilt, Coroutines, and Firebase, ensuring high-quality, maintainable code

Full-Stack Web Applications for <u>Online Business</u>, and <u>TakeAway Restaurant</u>

‣ Developed a full-stack web application for online business and a takeaway restaurant using Spring Boot (MVC) and MySQL database.

‣ Created a chat application with Spring Boot microservices and integrated its APIs into an Android app (MVVM).

Java Client Server Application - <u>Github</u>

Designed a multi-robot control application with a Java Swing GUI for real-time coordination.

Data Analysis and Machine Learning Project

‣ Developed a predictive model for human activity recognition using supervised learning & sensor data.

‣ Conducted performance analysis & model selection on the Extrasensory dataset.