

# Zaid Omer

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## Skills

**Languages:** C, C++, Java, C#, Python, Rust, JavaScript, Dart, SQL, Scala, HTML/CSS, MATLAB, Verilog, Assembly, VHDL

**Frameworks:** React/React Native, Express.js, Node.js, Flutter, Hadoop/HDFS, Thrift, Spark, Zookeeper, RAFT, Kafka, curl

**Tools:** Git, MySQL, Docker, LLaMA, Parallels, Jupyter, REST, SOAP, Jenkins, Postman, Firebase, CLion, Visual Studio, Jira

## Experience - Internships



### Apple Inc. - Embedded Firmware Engineer

Jan 2023 - Apr 2023

- Developed **C** and **C++** code for hardware modules, mock **drivers**, and high-speed data transfer. **Improved spurious emissions** in frequency response **by 20%** through code adjustments and verified results with **spectrum analyzers**.
- Contributed to Apple's **RF** sector, used tools like **GitHub**, **Make**, **CMake**, **Peta Linux**, **CLion**, **Jenkins** for build tests, and **Parallels** for **Ubuntu VM**. Utilized **Python** and **Jupyter** to run debugging scripts & analyze firmware code results/graphs.
- Built upon **vendor** work and participated in international factory builds with team members.



### TD Bank - Full Stack Software Engineer

May 2022 - Aug 2022

- Functioned in a team producing a web app managing financial reports, projects, etc. **Upgraded 90%** of legacy codebase.
- Administered **SQL** to manage **15+ database tables** in **SSMS**, and **SSIS** in Visual Studio to troubleshoot bugs in migration tasks. Crafted front & back-end code in **React & JavaScript**. Utilized **Python** for **REST API** requests to access external data.



### Abliminal - Software Developer

Jan 2021 - April 2021, Nov 2021 - Dec 2021

- Led the development of a mobile app created in **React Native**. Worked with **firebase** real-time databases **storing 85%** of user-specific data, sign-up/auth, UI design, the Expo framework, and the **Google Play** Console for android testing.
- Deployed **Google Analytics** code to a **ReactJS/JavaScript** web app to observe statistical user data, and helped revamp the signup process by implementing the **auth0** framework.



### HockeyShot - Mobile Developer

Sep 2021 - Nov 2021

- Collaborated on a **cross-platform** Android/iOS app (**Flutter/Dart**), managing the front/back-end in a scrum environment to develop various features.
- Architected database models that were implemented with **firebase**. Employed **state management** tools like the 'get' package, streamlined code based on the model-view-view-model framework, and conducted code reviews on **GitHub**.



### Ceridian - Software Developer in Test

May 2020 - Aug 2020

- Automated UI & API tests using **Java** for the app "Dayforce" on Android/iOS. Built and/or monitored **100+ tests**.
- Worked with **Jenkins**, **JMeter**, TestNG, Junit, **Selenium**, **Xcode**, mobile emulators, and Appium to write, debug, and test code. Managed tasks in scrum with Azure DevOps. Tested **functionality on 70%** of supported OS versions.



## Projects

### AutoHelm - Final Year Design Project

May 2023 - Present

- Engineered a robust Windows application with a simple UI, empowering users to automate computer tasks effortlessly. Can design workflows to automate anything using the **20+** building blocks provided by the software.
- Developed the **EBNF grammar** for a **custom programming language** to handle tasks behind the scenes and a web app for sharing users' work. Created with C#, XAML, Python, JavaScript/React, Firebase.
- Integrated **Meta's Llama 2 (Code Llama 13B)** model on an Ubuntu server, training it to code in our proprietary language, enabling a virtual assistant feature. Made an **Express-based REST API** for user-result communication with the **LMM**.



## Education

**University of Waterloo** - Computer Engineering Candidate 3.7/4.0 GPA, (B.A.Sc.)

Sep 2019 - Apr 2024 (Expected)

- *Currently enrolled in Programming for Performance – Concurrency, profiling, & GPU programming in Rust*
- *Currently enrolled in Introduction to Machine Learning – Data fitting, training, neural networks, regression in Python*