

Muradil Udun

3B COMPUTER ENGINEERING · UNIVERSITY OF WATERLOO

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Skills

Languages

C/C++ , Python , JavaScript , C# , Clojure/ClojureScript , HTML/CSS , Kotlin , MySQL , MATLAB , VHDL

Frameworks & Libraries

React, Vue.js, Polymer, Node.js, Express, Flask, .NET, Android, OpenCV

Tools & Technologies

AWS, GCP, Terraform, Docker, Git, KiCAD

Hardware

FPGAs, STM32 MCUs, ATmega32 AVR, Raspberry Pi, Arduino Uno,

Work Experience

D2L

Kitchener, ON

SOFTWARE DEVELOPER

May. 2021 - Aug. 2021

- Improved and maintained the D2L learning management system and internal libraries using **C#**, **.NET**, **Node.js**, and **AWS**
- Enhanced continuous integration and deployment through instant message reminders using Slack and **GitHub Actions**
- Increased telemetry and visibility into the IPSIS data ingestion pipeline to improve site reliability with service-level metrics
- Enabled centralized logging in a multi-region environment to improve debugging capabilities using **Terraform** and **AWS**

Oxilight

Toronto, ON

SOFTWARE DEVELOPER

Sept. 2020 - Dec. 2020

- Single-handedly developed a dashboard web app with data analytic tools to analyze medical measurements using **React**
- Built and tested several features for the company's **Android** apps including a daily routine feature using **Kotlin**
- Implemented video conferencing and logging capabilities for the main client interface with **Jitsi** and **Google Cloud Platform**
- Designed **DynamoDB** tables with **DynamoDB Streams** and **AWS Lambda** to create an event-driven architecture

eSentire

Waterloo, ON

SOFTWARE DEVELOPER

Jan. 2020 - Apr. 2020

- Developed the next iteration of company's main client interface using **React**, **Clojure**, **EQL**, and a **PostgreSQL** database
- Constructed data rich widgets by analyzing client security data using a graph API built with **Clojure** and **Pathom**
- Implemented a resource server to authenticate users and API calls using **Flask**, **Okta**, and **OpenIDConnect**
- Built a tool to generate tailored powerpoints by manipulating data from a **PostgreSQL** database using **Python** and **Flask**

Conrad School of Entrepreneurship and Business

Waterloo, ON

ENTREPRENEUR IN TRAINING

May. 2019 - Aug. 2019

- Specialized entrepreneurship co-op work program consisting of a 1-week intense **entrepreneurship** bootcamp followed by 2 micro-placements at early-stage start-ups **JUGELO** and **PFERA** for 10 and 5 weeks respectively
- Developed features for company's mobile and web platforms using **Vue.js**, **PHP/Laravel**, **MySQL**, and **ionic**
- Built a REST API with **Express** to allow clients to efficiently and securely store shipment data in a **NoSQL** database

Projects

Mechanical Keyboard

ATMEGA32A, KiCAD, AutoCAD

May. 2021 – Ongoing

- Designed a keyboard from scratch with features such as **USB-C**, over-current, over-voltage, and static discharge protection
- Prototyped and developed a mechanical keyboard PCB with the **Atmega32A** chip using **KiCAD** and **AutoCAD**

Real-Time Executive Operating System

C, ASSEMBY, ARM CORTEX-A9

Jan. 2021 – April. 2021

- Designed a RTX kernel for the **Intel DE1-SoC** board populated with a dual-core **ARM Cortex-A9** processor and **Altera FPGA**
- Implemented a multi-programming environment with task management, inter-task communication and synchronization, dynamic memory management, system console I/O, and real-time scheduling using **C** and **Assembly**

Automatic Door Opener

C, STM32F401RE, PROTEUS

Jan. 2021 – April. 2021

- Developed a power-efficient PCB design for an automatic door opener on the **STM32F401RE** MCU using **C** and **Proteus**

Education

University of Waterloo

Waterloo, ON

CANDIDATE FOR BACHELOR OF APPLIED SCIENCE IN COMPUTER ENGINEERING

Sept. 2018 - Present