

# Muradil Udun

4A COMPUTER ENGINEERING · UNIVERSITY OF WATERLOO

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## Skills

### Languages

JavaScript, Python, C/C++, C#, HTML/CSS, SQL, Clojure/ClojureScript

### Frameworks & Libraries

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

### Tools & Technologies

Git, AWS, Google Cloud Platform, Terraform, Docker

## Work Experience

### Sony Interactive Entertainment

Waterloo, ON

#### SOFTWARE ENGINEER INTERN

Jan. 2022 - April. 2022

- Enhanced features within the **PS4 Store** that are used by **48 million** users by efficiently resolving defects using **JavaScript**
- Spearheaded investigation into the navigation system of the **PS4 Store** to quickly resolve **critical** navigation related defects
- Increased the automation framework's testing capabilities of new UI components by **18%** using **Python** and **pytest**
- Awarded **\$1500** for **First Prize** in SIE's 12th Hackathon out of **170** teams with innovative software application design

### 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 to reduce manual work by **25%** using Slack and **GitHub Actions**
- Increased visibility into the IPSIS data ingestion pipeline by **20%** to improve site reliability using 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**
- 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**

## Projects

### BrailleTaille

#### PYTHON, OPENCV, RASPBERRY PI

May. 2022 - Ongoing

- Designed and developed a device to translate physical text to braille in real-time using **computer vision** and **deep learning**
- Implemented contour detection, noise removal, and adaptive thresholding algorithms to pre-process images
- Utilized **EAST** text detection with **non-max suppression** to feed areas of interest into **Tesseract** for character recognition

### Real-Time Executive Operating System

#### C, ASSEMBLY, 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 task and memory management, inter-task communication, and real-time scheduling using **C** and **Assembly**

## Education

### University of Waterloo

Waterloo, ON

#### CANDIDATE FOR BACHELOR OF APPLIED SCIENCE IN COMPUTER ENGINEERING

Sept. 2018 - Present