Muradil **Udun**

4A COMPUTER ENGINEERING · UNIVERSITY OF WATERLOO

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Skills

Languages	C/C++, Python, JavaScript, C#, Clojure/ClojureScript, HTML/CSS, MySQL, VHDL, Verilog, RISC-V, MATLAB
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 AVRs, Raspberry Pi, Arduino Uno

Work Experience

Sony Interactive Entertainment
Waterloo, ON

SOFTWARE DEVELOPER — *Jan. 2022 - April. 2022*

- Enhanced functionality within the **PS4 Store** by efficiently resolving defects and implementing features using **JavaScript**
- Spearheaded investigation into the navigation system of the **PS4 Store** to improve and document navigational functionality
- Increased automation test coverage and improved the framework's testing capabilities for new UI components using **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 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**
- 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

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, 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*