Yazan Masoud

289-230-4946 | ymasoud@uwaterloo.ca | linkedin.com/in/yaxan | github.com/yaxan | yazan.ca

Education

University of Waterloo — Waterloo, ON
Bachelor of Applied Science in Biomedical Engineering — *Sept. 2020 – April 2025*

Experience

Software Development Engineer — Sept 2022 – December 2022
Infinera Canada Inc. — *Ottawa, ON*

- Designed and implemented CLI API in C++ to configure Digital Sub-Carrier Groups via CRUD operations
- Instrumented SDK for heap memory and CPU profiling using gperftools and visualized with pprof and KCachegrind
- Wrote C++ unit test suite to test encryption bypass/passthrough mode on chip initialization using doctest
- Enabled port forwarding via IP tables to enable Docker container runtime to communicate with custom MCU

Software Developer — Jan 2022 – Apr 2022
Thomson Reuters — *Toronto, ON*

- Prototyped OpenTelemetry integration to generate and collect distributed traces for application performance and behavior analysis
- Identified and fixed vulnerabilities in .NET Core codebase using Veracode and SonarQube to meet the OWASP 2021 Standard
- Wrote unit tests in C# to increase Legal Tracker test coverage for legacy code by 8%

Software Engineer — May 2021 – Sept 2021
Cox Automotive Inc. — *Mississauga, ON*

- Explored methods to generate video game dungeons based off of *The Legend of Zelda*
- Developed user stories in agile environment with ASP.NET Core and C# for car dealership applications
- Implemented UI updates using Angular to modernize the DealerTrack platform and ensure AODA compliance
- Configured backend email automation for customer financing inquiries

Projects

Brain Wave Flappy Bird — Jan 2023 – Present

- Architected Brain-Computer Interface to play Flappy Bird with alpha/beta waves as input
- Designed and constructed analog circuit to amplify/filter brain waves in the 8-32Hz range
- Processed signals on Raspberry Pi using Python to apply FFTs, visualize data, and play game

Naruto Hand Sign Classifier — Mar 2022 – June 2022

- Designed live camera image classifier for hand gestures using transfer learning
- Trained 12-class model comparing architectures of MobileNetV2, ResNet50, VGG16, and InceptionV3
- Leveraged OpenCV in Python to curate dataset, track hand movement, and make live predictions
- Achieved 93.60% test accuracy and 83.33% live demo accuracy with VGG16

Skills

Languages: Python, C/C++, C#, SQL, JavaScript, HTML/CSS, Bash
Frameworks: Angular, Node.js, ASP.NET, .NET Core
Tools: Git, Docker, Unity, Jenkins, Linux, Xilinx Evaluation Boards, Zync SoC (Arm-Cortex A53)
Libraries: pandas, NumPy, Matplotlib, TensorFlow, Keras, OpenCV, eRPC/gRPC

Awards

Dean's Honour List
Governor General's Academic Medal
StarterHacks Best Design Award
Major League Hacking Best Use of SnapKit API