YAZAN MASOUD

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EDUCATION

University of Waterloo   Waterloo, ON

Bachelor of Applied Science in Biomedical Engineering, Software Engineering Option   *Sept. 2020 – April 2025*
- *GPA: 3.87/4.00, Dean's Honours List 2022, 2023*
- Coursework: Data Structures & Algorithms, Digital Computation, Digital Systems, Systems and Signals

EXPERIENCE

Software Engineer Intern   May 2023 – Sept 2023

Bearworks   *New York, NY*
- Worked alongside founders to launch Bearworks from inception, guiding product development, evaluating technologies, and making technical architecture decisions to begin client onboarding
- Supported 3 pilots by building a web application on Kubernetes using React, Next.js, FastAPI, Postgres, and AWS
- Improved pilot call volume by 35% by developing a REST API-driven voicemail drop system using S3 to auto-generate tailored voicemails with on-the-fly natural AI voice synthesis, enabling faster, targeted outreach
- Enabled 1000+ daily calls to have real-time transcriptions through WebsSockets with OpenAI's Whisper

Software Development Engineer Intern   Sept 2022 – Dec 2022

Infinera Corporation   *Ottawa, ON*
- Eliminated 6 manual steps from the Digital Sub-Carrier Group configuration process by building a RESTful CLI API in C++ to save development time from manual adjustments
- Rectified 2 critical bottlenecks in the ICE-X optical transceivers by instrumenting SDK with GPerfTools and pprof for memory/CPU profiling to meet chip lag and efficiency requirements
- Uncovered and fixed 10+ vulnerabilities by writing a doctest unit test suite for different chip encryption modes
- Streamlined integration of 4 microservices by enabling communication between Docker container and custom MCU

Software Developer Intern   Jan 2022 – Apr 2022

Thomson Reuters   *Toronto, ON*
- Led integration of OpenTelemetry in Legal Tracker to generate and collect visual application request data within distributed system, enhancing performance monitoring and root-cause analysis capabilities
- Achieved 100% test coverage for critical legacy components by developing an automated testing framework in C#
- Cut database query response times by up to 30s through Redis caching, indexing, and query optimizations

Software Engineer Intern   May 2021 – Sept 2021

Cox Automotive Inc.   *Mississauga, ON*
- Enhanced Dealertrack's retail platform performance by refactoring web application using Angular to incorporate lazy loading, AOT compilation, and code splitting
- Streamlined Dealertrack's user financing inquiry process by implementing an email automation system using Node.js with Express and SendGrid, eliminating manual follow-ups

PROJECTS

smartARM | *Python, C++, Azure AI*   *Website Link* ↗ | Mar 2023 – Present
- Worked with founders to enable an AI-powered prosthetic arm startup to progress from concept to functional prototype by architecting a control system using Python to process EMG signals

Brain Wave Gaming & Speech | *Python, OpenAI, SciPy, Multithreading*   *GitHub Link* ↗ | Jan 2023 – Feb 2023
- Built an EEG Brain-Computer Interface to play Flappy Bird and enable verbal communication, using custom circuitry, digital filtering, 8-32Hz brain wave processing on Raspberry Pi, and OpenAI's text completion API

Naruto Hand Sign Classifier | *Python, OpenCV, TensorFlow, Keras*   *GitHub Link* ↗ | Mar 2022 – June 2022
- Led design of computer vision pipeline for real-time hand gesture classification built on VGG16, achieving 93.60% test accuracy by leveraging OpenCV to curate dataset, localize/crop hand positions, and make predictions

SKILLS

Languages: C, C#, C++, Python, TypeScript, JavaScript, HTML, CSS, SQL
Frameworks and Libraries: React, Angular, .NET, FastAPI, Next.js, Node.js, Express
Tools: Git, Agile, AWS, Docker, JIRA, Jenkins, Kubernetes, Redis, Linux, MongoDB, PostgreSQL