Yazan Masoud

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EDUCATION

University of Waterloo | Waterloo, ON
Bachelor of Applied Science in Biomedical Engineering | *Sept. 2020 – April 2025*
- GPA: 3.87/4.00, Dean's Honours List 2022, 2023

EXPERIENCE

Software Engineer Intern | May 2023 – Sept 2023
Bearworks | *New York, NY*
- Worked alongside founders to launch Bearworks from inception, guiding product development, evaluating different technologies/vendors, 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 an automatic voicemail drop system using natural AI-synthesized voices, allowing for targeted and individualized outreach
- Enabled 1000+ daily calls to have real-time transcriptions by integrating OpenAI's Whisper model

Software Development Engineer Intern | Sept 2022 – Dec 2022
Infinera Canada Inc. | *Ottawa, ON*
- Eliminated 6 manual steps from the Digital Sub-Carrier Group configuration process by building a 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 distributed traces, 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, I2C* [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++, HTML, CSS, JavaScript, MySQL, PostgreSQL, Python, TypeScript
Tools: Angular, ASP.NET, AWS, Docker, FastAPI, Git, Jenkins, Kubernetes, .NET Core, Next.js, Node.js, React, Redis