Yazan Masoud

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EDUCATION

University of Waterloo May 2026
Bachelor of Computer Science *Waterloo, ON*
- *GPA: 3.87/4.00*
- *Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Computer Architecture*

EXPERIENCE

CentML May 2024 – Present
Software Engineer Intern *Toronto, ON*
- Built a PyTorch backend to support model/pipeline parallelism on TorchDynamo graphs for reducing GPU costs
- Designed an ML inference latency predictor that analyzes CUDA Graphs to select optimal GPU deployment

Extend January 2024 – April 2024
Software Engineer Intern *New York, NY*
- Rebuilt sales/customer support portal with new Go backend and Postgres read replica, cutting load times by 10x
- Enabled $1.1 million in charge volume by migrating enterprise admin app from Elm to React to support new client
- Integrated new MasterCard BINs into TSYS payment processor in Kotlin backend to onboard 3000+ new users

Bearworks May 2023 – September 2023
Software Engineer Intern *New York, NY*
- Developed and launched a web app leveraging React, Next.js, FastAPI, Postgres, & AWS to support 4 pilots
- Built a zero-shot voicemail system to auto-generate & synthesize tailored messages, improving call volume by 30%
- Enabled 1000+ daily calls to have real-time transcriptions through WebSockets with OpenAI's Whisper

Infinera September 2022 – December 2022
Software Engineer Intern *Ottawa, ON*
- Integrated a gRPC API suite in C++ enabling developers to configure digital subcarriers in test 300% faster
- Instrumented ASIC SDK with GPerfTools and pprof for chip memory/CPU profiling across 4 codebases
- Streamlined integration of 4 microservices using Bash scripts to bridge Docker containers with a custom MCU

Thomson Reuters January 2022 – April 2022
Software Engineer Intern *Toronto, ON*
- Integrated OpenTelemetry into Legal Tracker to generate/collect distributed traces, revealing 3 critical bottlenecks
- Automated invoice auditing processes using C# and .NET, reducing manual review time by 45%
- Implemented RESTful API for secure data exchange between Legal Tracker and external financial services

PROJECTS

smartARM | *Python, SciPy, Azure AI* [Website Link]
- Progressed AI-powered prosthetic arm startup from concept to functional prototype showcased by Microsoft for Global Accessibility Awareness Day 2023
- Architected a controls system in Python to process EMG signals leveraging FFTs & high/low-pass filters

Brain Wave Gaming & Speech | *Python, OpenAI, SciPy, Multithreading* [GitHub Link]
- Built an EEG Brain-Computer Interface to play Flappy Bird, using custom circuitry & DSP on brain waves
- Implemented techniques from research paper by Masaki Nakanishi to enable verbal communication through steady-state visually evoked potentials and OpenAI's text completion API

Naruto Hand Sign Classifier | *Python, OpenCV, TensorFlow, Keras* [GitHub Link]
- 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: Python, TypeScript, JavaScript, C++, C, Go, Kotlin, C#, HTML, CSS, SQL
Frameworks and Libraries: React, Angular, PyTorch, FastAPI, Next.js, Node.js, CUDA
Tools: Git, AWS, Docker, Kubernetes, Linux, MongoDB, PostgreSQL
Concepts: Full-Stack Development, Back-End Development, Agile Methodologies, Machine Learning, Parallel Programming, Web Frameworks, System Design, Distributed Systems, REST API, Unit Testing, Version Control, CI/CD