

LAITH ASSAF

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PROFESSIONAL SUMMARY

Full-stack engineer specialized in building and deploying **AI/ML systems** end-to-end. Proven ability to rapidly ship production-grade applications—from **real-time audio classification** to **infrastructure automation**—with focus on measurable performance and user impact. Seeking roles in **software engineering and AI/ML** where I can leverage both broad technical versatility and deep machine learning expertise.

TECHNICAL SKILLS

Languages: Python, C++, C#, SQL, TypeScript

AI/ML: PyTorch, TensorFlow, OpenAI API, ML-Agents, YAMNet, OpenCV, Ollama

Web & Mobile: FastAPI, Flask, React, REST APIs, WebSockets, Firebase, Supabase

Infrastructure & Tools: Unity, Git, Linux, Docker, SSH, AsyncIO, Streamlit

EXPERIENCE

IT and Media Services Support Associate

May 2023 - Present

MSU College of Osteopathic Medicine

East Lansing, MI

- Managed 100+ **classroom configurations** across 4 locations supporting 1,200+ medical students, processing 50-70 **technical tickets** weekly with 5-10 minute **response time**
- Achieved 99.5% classroom uptime preventing estimated \$50K annual losses through systematic troubleshooting methodology: implemented diagnostic framework using variable isolation and root cause elimination to resolve **connectivity, display, audio**, and video conferencing issues within 5-minute SLA for 1,200+ students

PROJECTS

SoundSense - Real-Time Audio Classification | *Python, YAMNet, MemryX, Flask, WebSocket* October 2024

- Built real-time **audio classification** system for accessibility applications using **YAMNet model** on **MemryX MXA accelerators**, achieving **95% accuracy** with <50ms **latency** across 521 event classes, enabling real-time hazard detection for hearing-impaired users. **Won at MHacks** (24-hour hackathon, University of Michigan)

Nexus - AI Server Management System | *FastAPI, GPT Models, SSH, AsyncIO*

September 2024

- Architected real-time **SSH terminal** web platform using **FastAPI, WebSockets**, and **AsyncSSH** reducing server management time by 70% (30min → 9min daily) for 5-server infrastructure. Achieved sub-10ms response latency with **asynchronous** command execution and real-time output streaming, replacing traditional terminal workflows

LEADERSHIP

AI Club Workshop Coordinator

March 2024 - Present

Michigan State University

East Lansing, MI

- Designed and delivered 8+ technical workshops on **local LLMs, AI ethics**, and **AI/ML concepts** to 500+ attendees, maintaining 90% attendance rate and 4.8/5 satisfaction score
- Competed in 5+ hackathons (**MHacks, SpartaHack**), leading teams in rapid prototyping. Built web apps (language.plusplus, FusionFeast) and ML systems, delivering MVPs within 24-48 hours

AI Club Project Lead

January 2024 - Present

Michigan State University

East Lansing, MI

- Led 4-student team building **Academic Performance Predictor** using **GPT-4 API** for pattern analysis, achieving **80% accuracy**. Engineered system parsing transcripts, syllabi, and grades to identify course similarity patterns (e.g., Physics 1 predicting Physics 2). Established agile sprints and code reviews, delivering production application in 4 months

EDUCATION

Michigan State University, College of Engineering

East Lansing, MI

BS Computer Science, AI/ML | Dean's List

August 2022 - December 2027

- Relevant Coursework:** Algorithms & Data Structures (CSE 331), Information Management & Cloud Computing (CSE 380), Computer Organization & Architecture (CSE 320)