Laith Assaf

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PROFESSIONAL SUMMARY

CS student with production AI/ML deployment experience: built real-time audio classification achieving 95% accuracy with sub-50ms latency (**2nd place MHacks winner**), architected SSH management reducing server operations by 70%, and led teams delivering ML systems with 80%+ accuracy. Designed technical workshops for 500+ students maintaining 4.8/5 satisfaction across all sessions.

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 2nd place** in MemryX track 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

Cleanse - Adaptive Enemy AI Game | *Unity, ML-Agents, C#, Deep Reinforcement Learning* August 2024

- Developed Unity game with adaptive enemy AI using **ML-Agents** and **Deep Reinforcement Learning** to learn player behavior patterns. Trained agents to dynamically adjust **Finite State Machine** strategies mid-game, creating increasingly challenging encounters as enemies adapted to individual playstyles, improving player engagement by 40%

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