

Amen Lemiesa

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EDUCATION

University of Michigan

Bachelor of Science in Computer Engineering, Minor in Math

- 3.9/4.0 GPA

Ann Arbor, MI

May 2027

EXPERIENCE

Paid Research Assistant

June 2024 – Present

University of Michigan Transportation Research Institute (UMTRI)

Ann Arbor, MI

- Processed over 5,000 3D PCAR hand meshes using Python and Vedo to improve realism in pose estimation and joint alignment
- Implemented ray tracing algorithms for height map extraction, improving alignment accuracy across 21 anatomical landmarks
- Redesigned model architecture with dropout and normalization layers, reducing test error by 15% and mitigating overfitting

Paid Data Engineering Intern

June 2025 – Present

University of Michigan – Electrical and Computer Engineering Department

Ann Arbor, MI

- Processed electricity data from 200,000+ Detroit-area homes, creating anonymized datasets for geographic usage modeling
- Engineered Python pipelines that cleaned and reshaped 15GB+ of tabular data, reducing preprocessing time by over 60%
- Generated high-integrity datasets used to support energy equity research and infrastructure planning across urban sectors

Embedded Systems & Navigation Engineer

September 2024 – May 2025

Michigan Autonomous Robotic Vehicles (ARV) – Navigation Team

Ann Arbor, MI

- Designed ROS 2-based navigation stack integrating LiDAR and IMU data for sub-meter ground vehicle tracking
- Optimized motion planning on Jetson Xavier hardware, improving obstacle avoidance and reducing path deviation by 20%
- Developed firmware interfaces for motor control modules, enabling real-time velocity and trajectory tuning at 10Hz update rates

PROJECTS

Chrome Dino Auto Player | *JavaScript, TypeScript, React, Redux, Puppeteer, WebAssembly (Rust), C++*

- Engineered a Chrome extension that autonomously plays the Dinosaur game, with a high score of 190,000+
- Integrated obstacle detection logic using computer vision and reinforcement learning for adaptive gameplay
- Built using React, Redux, and Webpack; Rust and C++ modules for performance-critical logic
- Designed a responsive UI and ensured secure, cross-platform deployment on the Chrome Web Store

TECHNICAL SKILLS

Languages: Java, Python, C++, JavaScript, TypeScript, MATLAB, HTML/CSS, SQL, Bash

Frameworks & Platforms: React, Node.js, Django, Flask, Express.js, WordPress, Ruby on Rails, Firebase

Developer Tools: Git, Docker, Kubernetes, Google Cloud Platform (GCP), AWS, VS Code, IntelliJ, Jupyter Notebook

Libraries: pandas, NumPy, Matplotlib, SciPy, TensorFlow, scikit-learn, OpenCV

ACTIVITIES

Michigan Data Science Team (MDST)

Michigan Climbing Team

AWARDS/SCHOLARSHIPS

University of Michigan Samuel L. Chappel Alumni Association Scholarship

University of Michigan Engineering Scholarship of Honor

University of Michigan LEAD Scholar