Amen Lemiesa

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EDUCATION

University of Michigan   Ann Arbor, MI
Bachelor of Science in Computer Science, Minor in Math   *May 2028*

EXPERIENCE

Paid Research Internship   June 2023 – June 2024
University of Maryland   *College Park, MD*
- Engineered Python scripts for automated data extraction and processing from high-speed camera footage, optimizing analysis of blast test impulse data
- Utilized advanced algorithms to simulate explosive impacts on vehicle hull designs, scaling 1/10th scale test results to full-scale models using Hopkinson-Cranz scaling
- Integrated high-speed camera systems with PCC software to enhance the precision of data acquisition and real-time analysis

Web Developer   May 2024 – Present
The Michigan Daily   *Ann Arbor, MI*
- Developed and maintained website features using Ruby on Rails, JavaScript, and HTML/CSS, increasing page load speed for a website with over 400,000 monthly visitors.
- Collaborated with a team of 4 engineers to build internal publishing tools, reducing content delivery time by 30% for editorial teams.
- Integrated APIs and designed dynamic article layouts, improving user engagement on interactive features such as crosswords and multimedia components.
- Implemented a CI/CD pipeline using Git Actions, automating deployments.

PROJECTS

HandTrackJS | *JavaScript, TensorFlow.js, Handpose, HTML5 Canvas*
- Developed a real-time hand tracking web application using TensorFlow.js with over 20 landmarks per hand
- Implemented webcam integration, processing over 30 frames per second for seamless hand gesture detection
- Customized color-coded visualization for different fingers with over 100 lines drawn for hand connections
- Achieved hand pose estimation using the Handpose model with a response time under 100ms per frame

PaperTrader | *JavaScript, Alpha Vantage API, HTML5 LocalStorage*
- Built a stock trading simulator handling over 10,000 simulated dollars with price data from Alpha Vantage API
- Implemented buy/sell functionality for over 100 stock symbols with dynamic updates
- Utilized LocalStorage for persistent portfolio and cash data with portfolio growth visualized in real-time
- Enabled seamless trade logging with real-time updates to portfolio and asset values

TECHNICAL SKILLS

Languages: Java, Python, C++, JavaScript, HTML/CSS, MatLab
Frameworks: React, Node.js, WordPress, Ruby on Rails
Developer Tools: Git, Google Cloud Platform, VS Code, Eclipse
Libraries: pandas, NumPy, Matplotlib

ACTIVITIES

Michigan Autonomous Robotics Vehicles (ARV) - Navagation Team
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