Salvador Sanchez

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EDUCATION

Wayne State University, Detroit, MI
Bachelor of Science in Computer Science *May 2027* | GPA: 3.9/4.0
Relevant coursework: Data Structures & Algorithms, Probability & Statistics for Engineers, Computer Science II, Java Programming, Computer Science I, Human-Computer Interactions, Computer Architecture & Design

EXPERIENCE

Wayne State University- Detroit, MI
Undergraduate Research Assistant, Dr. Yi Zhu's Lab *April 2026 - Present*

- Investigating adversarial attack vulnerabilities in Vision-Language Model (VLM) and Vision-Language Action (VLA) based embodied AI agents
- Conducting literature review on adversarial machine learning and red-teaming methodologies for embodied AI systems
- Setting up simulation environments (MuJoCo / NVIDIA Isaac Sim) to test security vulnerabilities in VLM/VLA-based AI agents

Orange Sparkle Ball - Detroit, MI
Detroit Operations Strategist *Oct 2025 – Present*

- Innovation accelerator focused on advancing public and private sector organizations' community initiatives forward.
- Leading QA testing for autonomous robot hailing and logistics platform, validating endpoints, user flow, and system reliability.
- Collaborating with developers on a user platform that allows users to schedule a pick-up from autonomous robot partners (Node.js, Next.js, PostgreSQL).
- Supporting cloud deployment, monitoring, and workflows using AWS.

PROJECTS

Litix - AI Powered Fantasy Football Platform | Java, Spring Boot, PostgreSQL, Google Cloud Platform

- Engineered a scalable backend system in Spring Boot with PostgreSQL to manage users, leagues, player stats, and fantasy analytics.
- Integrated Vertex AI to generate natural explanations for trades, waiver pickups, and weekly strategy, while keeping core logic deterministic and data driven.
- Implemented a self-built ANN model for scoring and predicting player outcomes on trades and waiver pickups, served through a backend API.

MoodLens - Emotion-Responsive Work Environment App | Python, SciKit-Learn, PyQT, MediaPipe

- Built real-time emotion detection using Python, PyQt5, and MediaPipe with a tiered intervention system (screen tinting, ambient sound, guided breathing)
- Developed a predictive stress model that learns user patterns to trigger calming interventions before stress onset, shifting from reactive to proactive support
- Conducted usability testing, iterating on intervention thresholds and timing based on findings

SKILLS

Languages: Python, C++, Java, JavaScript, SQL
Frameworks: Spring Boot, Flask, Nest.js, Angular, PyQt5
AI/ ML: PyTorch, scikit-learn, Vertex AI, MediaPipe, DeepFace
Tools & Cloud: Docker, PostgreSQL, GCP, AWS, REST APIs, HTML/CSS