Noah Solorzano

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Skills

- **Languages:** Python | Java | C++
- **AI / ML:** PyTorch | scikit-learn | Computer Vision (MediaPipe, OpenCV) | Model Integration | ML Pipelines
- **Distributed Systems:** gRPC | Protobuf | ActiveMQ | Pub/Sub | Event-Driven Architecture
- **MLOps / Infra:** Docker | Podman | Kubernetes | Helm | GitLab CI/CD | Poetry

Work Experience

AI/ML Software Engineer — Lockheed Martin AI Center July 2025 – Present

- Key engineer for **AI Fight Club (AIFC)**, a distributed AI simulation and evaluation system running on containerized Kubernetes clusters, enabling scalable multi-agent experimentation.
- Designed and implemented AIFC's bidirectional UCI layer by **turning the raw ICD specification into a production-grade AFSIM extension** that translates internal scripting events into UCI messages and ingests external UCI commands to drive platform behavior in real time.
- Designed and operated the **Kubernetes + Helm** stack for AI simulation workloads (AFSIM, AI agents, ActiveMQ, CAL servers), including Rancher-based cluster management and custom routing for high-throughput **UDP and TCP** traffic (UCI/DIS/GSI).
- Authored and maintained **Dockerfiles**, container build pipelines, automated artifact publishing, and deployment workflows.
- Collaborated with ML teams to refine **model I/O schemas**, improve agent controllability, and validate behaviors across adversarial scenarios.
- Contributed to the official **AIFC Participant Guide**, including architecture diagrams, onboarding process, standard messaging compliance requirements, and integration best practices.
- Provided engineering support during **AIFC Hackathon**, debugging issues and design guidance for participating teams.

Software Engineer — Top Secret Clearance — Lockheed Martin ADP Apr 2023 – July 2025

- Maintained and extended a modeling & simulation suite of 25+ **Java/C++ microservices**, containerized with Docker/Podman and orchestrated with Kubernetes.
- Built internal automation tools for building, packaging, versioning, Git operations, and dynamic code replacement — reducing developer time by **2+ hours**.
- Enhanced the Lightweight Container Framework (LWCF), removing rebuild requirements for debug-mode switching and saving **10+ minutes** per test cycle.
- Standardized cross-service communication using **UDP** and **gRPC**, improving timing alignment and reliability.
- Integrated supplier emulators, AFSIM, and Joint Simulation Environment (JSE) into distributed mission systems environments.
- Led an AR-based cockpit simulation initiative using **Varjo** headsets and embedded HUD/HMD overlays.
- Diagnosed complex networking and performance issues in containerized **Linux** environments, increasing stability of long-running simulations.
- Served as **Scrum Master**, managed Jira planning artifacts, and coordinated multi-team deliverables.

Education

University of Texas at Arlington, Fort Worth, TX

M.S. in Software Engineering, GPA: **4.0** May 2025

Texas Woman's University, Denton, TX

B.S. in Computer Science, GPA: **4.0** Dec 2021

Summa Cum Laude | **Outstanding CS Student Award** | **Dean's List**

Personal Projects

AI-Powered Exercise Form Visualizer (OpenCV, MediaPipe)

Developed a **real-time** computer vision tool using **MediaPipe** for **pose estimation** and **OpenCV** for webcam-based feedback. Computed joint angles to assess form versus biomechanical templates and provide instant corrective cues.

Review-Based Movie Recommender (Python, scikit-learn)

Built a semantic movie recommender using **TF-IDF** and **cosine similarity** to identify films matching user-perceived tone and thematic content.