

# Noah Solorzano

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## Skills

- Languages: **Java** | **C++** | **Python** | **Bash** | **SQL**
- Tools: **Docker** | **Podman** | **Kubernetes** | **Gradle** | **Linux** | **Spring Boot** | **Git** | **CI/CD** | **Jira** | **Ansible** | **Helm** | **CMake** | **Vcpkg**
- Frameworks: **Agile** | **Scrum** | **Kanban**
- Networking: **gRPC** | **Protobuf** | **UDP** | **CIGI** | **UCI** | **DIS**

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## Work Experience

Software Engineer - Top Secret Clearance

Lockheed Martin – ADP  
April 2023 – Present

### Core Development

- Develop and maintain a **Modeling and Simulation** software suite of 25+ **Java** and **C++** microservices packaged as deployable **Docker**/**Podman** containers orchestrated with **Kubernetes**. Requires deep familiarity with **Spring Boot**, **multi-threading**, **Vcpkg**, **CMake**, **GitLab CI/CD**, and containerization.
- Create and maintain **Bash** and **Python** scripts for internal tooling and infrastructure support.
- Serve as cross-team data mediator: standardize communication protocols (**UCI**, **DIS**, **gRPC**, **CIGI**), align timing, and optimize data flow across teams' services.
- Support integration of simulation services with supplier-provided emulators, **AFSIM**, and the **Joint Simulation Environment (JSE)** in secure classified lab environments.

### Developer Improvements

- Designed an internal **automation tool** for multi-service workflows: building, packaging, versioning, **Git operations**, and dynamic code replacement. Reduced suite update time by **2+ hours** and minimized manual error risk.
- Improved developer productivity by enhancing the **Lightweight Container Framework (LWCF)**, refactoring plugin utilities, and eliminating the need to rebuild services to switch debug modes—saving **10+ minutes** per test cycle.

### Mixed Reality Cockpit Simulation

- Lead an augmented reality-based cockpit simulation effort using a **Varjo headset**, integrating **HUD/HMD** and embedded graphics overlays with physical cockpit hardware and **Integrated Graphics Aechelon** for immersive flight training.

### Scrum Master Responsibilities

- Act as **Scrum Master**: lead **Agile** ceremonies, facilitate **Scrum-of-Scrums** coordination, and resolve blockers to sustain team velocity.
- Manage **Jira** boards and roadmaps to support dynamic **PI planning**, backlog refinement, and delivery alignment.

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## 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**

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## 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 visual feedback. Calculated joint angles from 33-point landmarks to assess form, compare against biomechanical templates, and deliver instant feedback for posture correction and injury prevention.

### Q-Learning and Deep Q-Learning Agent (Python, OpenAI Gym)

Implemented both **Q-Learning** and **Policy Iteration** on the **Frozen Lake** environment. Tuned hyperparameters (**alpha**, **gamma**, **epsilon**) to analyze convergence and stability. Extended to a Deep Q-Learning agent using a neural network to approximate Q-values and trained it on an **Atari environment** using **OpenAI Gym**.

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

Built a semantic movie recommender that compares user review language using **TF-IDF** and **cosine similarity** to identify films with viewer-perceived tone and themes similar to a given target movie.