

# Jesse Oh

Austin, TX / Los Angeles, CA • jso687@utexas.edu • + 1 (818) 480-2616

linkedin.com/in/jesse-oh-jso687 • github.com/Jesse-Oh-3709

## EXPERIENCE

**Cogniedge AI** | *Software Engineering Intern*

09/2025 – Present

- Developing a computer vision safety system for Human-Robot Collaboration (HRC) using Mediapipe and OpenCV.
- Engineered a real-time posture estimation pipeline to calculate ergonomic safety scores from skeletal joint data.
- Built a Streamlit dashboard to visualize live telemetry and safety metrics, enabling automated robotic speed modulation.
- Integrating multi-modal sensor data to optimize worker safety and industrial automation efficiency.

**Elite Prep** | *Administrative Intern*

06/2025 - 08/2025

- Created a Chrome Extension and scheduling automation engine (Node.js), reducing manual administrative work by 95%.
- Conducted iterative debugging and Agile testing to ensure UI reliability for enterprise-scale scheduling systems.

**Mechanics of Natural and Synthetic Biological Structures** | *Technical Illustrator & Contributor*

05/2025 - Present

- Developed high-fidelity tensor diagrams and vector illustrations in Figma to visualize stress-strain relationships and multi-axial loading in biological tissues.
- Collaborated on the technical review of manuscripts, checking the accuracy of mathematical and biomechanical models.

**Texas Rocket Engineering Lab** | *Front-end Developer*

02/2024 - 10/2024

- Led the redesign of the laboratory's web presence, resulting in a 20% increase in positive user engagement and optimized load performance.
- Translated high-fidelity Figma wireframes into responsive, accessible web interfaces using HTML, CSS, and JavaScript.

## PROJECTS

**Biomedical Data Pipeline** | *Python, SQL, Databricks, Airflow*

- Architected an automated pipeline to ingest and transform heterogeneous datasets (imaging/time-series), improving data reliability by 40%.
- Implemented anomaly detection and schema enforcement to support downstream digital health analytics.

**Dental Disease Prediction** | *PyTorch, CNN, Grad-CAM*

- Trained a ResNet-18 model to classify dental pathologies from X-ray imagery with high precision.
- Utilized Grad-CAM to visualize CNN focus regions, validating model transparency for clinical use cases.

## EDUCATION

**University of Texas at Austin** | **B.S. Computational Engineering** | **College Scholar, UT Austin Honors** | GPA: 3.82 | *Expected 2027*

**Relevant Coursework:** Linear Systems, Machine Learning, MLOps, Software Eng. & Design, Finite Element Analysis, Probability, Solids, Statics, Linear Algebra

## SKILLS

- **Software & ML:** Python, C++, MATLAB, SQL, JavaScript, Node.js.
- **AI Frameworks:** PyTorch, OpenCV, Mediapipe, Streamlit, XGBoost (added for 10xR match).
- **Data & Infrastructure:** Databricks, Airflow, Snowflake, Docker, Linux/Unix, Git.
- **Engineering Design:** Figma, Finite Element Analysis (FEA), Tensor Calculus, Agile/CI/CD.