

Jesse Oh

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EXPERIENCE

Cognidged AI Software Engineering Intern	09/2025 – Present
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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	
<ul style="list-style-type: none">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	
<ul style="list-style-type: none">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

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- 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.