

SEOWON JEONG

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EDUCATION

University of Texas at Austin

B.S. in Mechanical Engineering Honors | GPA 3.85

M.S. in Mechanical Engineering for Advanced Design and Manufacturing | GPA 3.78

MECHANICAL DESIGN EXPERIENCE

ClearScope Medical Laparoscopic Simulator - Mechanical Design Lead

Jan 2025 - May 2025

- **Owned end-to-end mechanical design** of a human-torso laparoscopic training simulator, creating detailed SolidWorks part and assembly models with emphasis on **ergonomics, durability, and manufacturability**.
- Selected materials and manufacturing processes to balance stiffness, realism, and cost, reducing total system cost to **~10% of commercial products**.
- Built and iterated multiple functional prototypes using **machining and additive manufacturing**, performing fit checks and tolerance refinements.
- Conducted structured user testing with clinical trainees, improving usability and realism to **>90% satisfaction**.

Battery Defect Detection & Control System — Mechanical/Systems Engineer

Sep 2024 - May 2025

- **Designed and fabricated** mechanical housings, fixtures, and mounts for a custom battery control and testing system, improving system efficiency by **50%**.
- **Integrated mechanical components** with electrical hardware to ensure safe operation, robustness, and repeatable assembly.
- Developed an automated defect-inspection pipeline for **10,000+ X-ray images**, reducing analysis time by **24+ hours** using Python.
- Supported **manufacturing and assembly of prototypes**, refining designs based on test results and system constraints.

EcoCar EV Program — Mechanical Systems Integration Engineer

Oct 2023 - May 2024

- Re-engineered portions of a Cadillac electric vehicle, developing **SolidWorks** and **Siemens NX** models to redesign rear-section packaging.
- Resolved **20%+ wiring and mechanical interference issues** through improved routing, bracket design, and assembly layout.
- Supported hands-on teardown, subsystem integration, and vehicle reassembly in a multidisciplinary team environment.

INDUSTRY EXPERIENCE

Infineon Technologies Manufacturing Engineering Intern | Austin, Texas

May 2024 - August 2024

- **Performed DOE with statistical analysis** on semiconductor etch processes, improving yield by **10%**.
- **Increased production efficiency by 120%**, eliminating bottlenecks and achieving annual savings of **\$50,400**.
- **Led project planning and execution** in close collaboration with mentor, ensuring alignment with technical and operational goals.
- **Coordinated across engineering and operations teams** to streamline workflows and optimize production processes.

RESEARCH EXPERIENCE

Human-AI Design Engineering - Lab Assistant

Sep 2025 - May 2026

- **Researching AI-assisted workflows** for early-stage mechanical design and CAD generation.
- **Evaluating manufacturability and usability impacts of AI-driven design** ideation through workshops with professional designers.

SKILLS

CAD: SolidWorks, AutoCAD, Siemens NX, OnShape

Mechanical: Machining, Additive Manufacturing, DFM/DFA, GD&T, Tolerance Analysis

Analysis/Software: JMP, Python, MATLAB, Java