JOSHUA LEICHT

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https://joshleicht314.github.io/index.html

EDUCATION

University of Illinois at Urbana-Champaign May 2025
Bachelor of Science in Mechanical Engineering GPA: 3.93/4.00

Related Coursework:

Engineering Materials	Mechanical Design II	Intro to Computing
Finite Element Analysis	Dynamics of Mechanical Systems	Energy Conversion Systems

WORK EXPERIENCE

Exile Technologies Design Internship – *Houston, Texas* May 2024 – August 2024

- Designed and 3D-printed removable covers for exposed cables, integrating seamlessly with existing assemblies without additional hardware.
- Collaborated on creating a complete 3D model of a flagship product using SolidWorks.
- Developed detailed cable and exploded assembly drawings for manufacturing and assembly processes.
- Assisted in assembling the initial prototype of a new product, troubleshooting mechanical challenges during the build.
- Gained comprehensive insight into the product design process through hands-on experience

Exile Technologies Internship – *Houston, Texas* May 2023 – August 2023

- Designed a pneumatic system to remove excess ink after print head purge, enhancing system reliability.
- Developed prototypes using 3D-printed and machined aluminum parts from local suppliers.
- Redesigned components to improve rigidity and added multi-axis adjustability.
- Conducted ink trials, including dehydration testing and silicon-ink interaction assessments.
- Collaborated with senior engineers to deepen understanding of the engineering design process.

PROJECT HIGHLIGHTS

Food Slicer Project August 2023 – December 2023

- Worked with a team of 3 individuals to design a fruit and vegetables slicer using a motor
- Used modern manufacturing techniques to produce a prototype cable of slicing
- Tested on numerous foods including hard and soft food for consistent and quick slicing

Design for Manufacturing Project January 2022 - May2022

- Used 3D printers and laser cutters to create a Rube-Goldberg machine to activate a light
- Collaborated with group members to rapidly solve manufacturing issues and unexpected part failures
- Created a Fusion360 modeled assembly with animations

Computer Aided Design Project August 2021 - December 2021

- Designed a removable tabletop surface to solve the lack of workspace for dorm students working in bed
- Using DFM concepts, our team reduced the estimated total manufacturing cost to below $20
- Created detailed working drawings of all parts requiring manufacturing and assembly

TECHNICAL SKILLS

Digital Fabrication Tools: Fusion360, SolidWorks, Inventor, Prusa slicer, Bambu slicer, Cura
Programming Languages: Python (Matplotlib, CoolProp, NumPy, SymPy), Excel, MATLAB, Simulink
Tools: 3D printing, welding, soldering, laser cutting, general assembly

EXTRACURRICULAR ACTIVITIES AND AWARDS

ASME January 2024-Present

- Worked with a team to develop a miniature basketball launcher following natural biomechanics for EOH

HONOR ROLL Spring 2023- Fall 2024