Carlos Sanchez

Email: crsanche@alumni.cmu.edu **| Cell:** 610-350-6929 **|** Portfolio Website **|** LinkedIn

EDUCATION

Carnegie Mellon University | Pittsburgh, PA

- Bachelor of Science in Mechanical Engineering, May 2024
- Cumulative GPA: 3.31/4.00

RELEVANT EXPERIENCE

Goppion Technology, Mechanical Engineering Intern | Summer 2023

- Performed failure analysis on installed display cases and proposed design changes across 4 sites to increase mean time between failure
- Documented repair and installation processes, and compiled final report for each site

LeDuc Lab, Research Assistant | Pittsburgh, PA, Summer 2022-Spring 2023

- Designed and fabricated microfluidic chips using SolidWorks and resin 3D printing
- Cast PDMS polymer and used a plasma cleaner to adhere PDMS to microscope slides
- Successfully created a testing setup for further experiments on cress plants

PROJECTS

Transistor Fabrication Robot | Hacker Fab | Spring 2024

- Designed a pick and place machine to automate wet steps of small-scale transistor fabrication
- Retrofit tweezer design to an existing 3D printer to repurpose gantry system, modeled in SolidWorks
- Consistently picked up silicon wafer chips, which will allow 9 of 21 current steps to be automated

Energy Recovery Bicycle | Engineering Design II | Spring 2024

- Led a team of 5 to design a mechanism that stores and releases energy from the motion of a bicycle
- Reduced the rider input needed to power a bicycle, modeled in SolidWorks and Fusion 360
- Awarded “Most Innovative” out of 20 teams

Steady Cup | Engineering Design I | Spring 2023

- Designed a handle attachment for cups intended to prevent spillage by rotating
- Fit a variety of cup sizes without modification, modeled in SolidWorks and 3D printed

Piano-mobile | Build-18 | Spring 2023

- Designed and built a vehicle controlled by the inputs of an attached piano
- Created for an annual CMU event in one week for under $200 USD
- Awarded “Runner-up Officers Choice” out of more than 40 teams

RELEVANT COURSES

Stress Analysis	Heat Transfer	Mechanical Systems Experimentation
Additive Manufacturing	Hacker Fab	Engineering Design II

LEADERSHIP

Independent Musicians Organization, President | Fall 2023-Spring 2024

- Communicated with venues and school staff to facilitate at least 3 concerts per semester
- Reduced runtime past scheduled end of performances from ~1 hour to an average of 15 minutes

SKILLS

Software: SolidWorks, Fusion 360, MATLAB, Microsoft Office, Adobe Illustrator, Adobe InDesign
Machines: Mill, Lathe, 3D Printer, Laser Cutter, Table/Band/Miter Saw, MIG/TIG Welder
Languages: Conversant Spanish, Basic Chinese

ACTIVITIES & HONORS

College of Engineering Dean’s List | Spring 2023
Independent Musicians Organization | Fall 2021-Spring 2024
Student-Athlete | Carnegie Mellon Crew Team | Fall 2021-Spring 2024