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

Hacker Fab, Nanofabrication Process Development | Pittsburgh, PA, 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, allowing 9 of 21 current steps to be automated

Goppion Technology, Mechanical Engineering Intern | East Coast, US, 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 3D-printed microfluidic chips to cast in PDMS polymer
- Conducted research individually under guidance of advisor
- Successfully created a testing setup for further experiments on cress plants

LEADERSHIP

Independent Musicians Organization, **Co-president |** Fall 2023-Spring 2024,
Event Planner | Fall 2022-Spring 2023

- Collaborated with venues and school staff to facilitate 3 concerts per semester
- Coordinated with 8 officers and co-president to ensure weekly tasks were understood and achieved
- Implemented strategy that reduced downtime between performers during concerts

PROJECTS

Energy Recovery Bicycle | Engineering Design II | Spring 2024

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

Piano-mobile | Build-18 | Spring 2023

- Worked in a team of 4 to design and build a vehicle controlled by the inputs of an attached piano
- Created for an annual CMU event in one week for under $200 USD

RELEVANT COURSES

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

SKILLS

Software: SolidWorks, Fusion 360, MATLAB, Microsoft Office, Adobe Suite
Manufacturing: 3D Printing, Manual Machining, Woodworking, Welding
Languages: Conversant Spanish, Basic Chinese

ACTIVITIES & HONORS

College of Engineering Dean’s List | Spring 2023
Musician | Multiple Independent Bands | 2018-Present
Student-Athlete | Carnegie Mellon Crew Team | Fall 2021-Spring 2024