Carlos Sanchez

Email: crsanchezwork@gmail.com | **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

R.E. Uptegraff Manufacturing, Mechanical Design Engineer | Scottdale, PA, July 2024-Present
- Spearheaded the overhaul of 3D SolidWorks template files for electrical transformer design
- Created technical drawings of electrical transformers for manufacturing and client-facing approval
- Implemented manufacturing checks to avoid over 5 errors per month that would halt production

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 onto an existing 3D printer to consistently move silicon wafers
- Eliminated the need for fine motor skills in 9 of 21 production steps

Goppion Technology, Mechanical Engineering Intern | East Coast, US, Summer 2023
- Performed failure analysis on installed museum display cases and proposed design changes across 4 sites to increase mean time between failure

LeDuc Lab, Research Assistant | Pittsburgh, PA, Summer 2022-Spring 2023
- Designed and 3D-printed molds for microfluidic chips to allow experimentation on cress plants

LEADERSHIP

Independent Musicians Organization, **Co-president |** Fall 2023-Spring 2024,
Event Planner | Fall 2022-Spring 2023
- Collaborated with local 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 scheduling strategy to reduce downtime between performances 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

RELEVANT COURSES

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

SKILLS

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

ACTIVITIES & HONORS

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