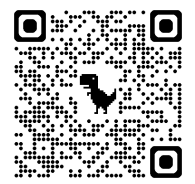


Marcus Wahila



Marcus.Wahila.com

Pittsburgh, PA, 15213 | 412-773-5988 | MAW581@pitt.edu |

Mechanical Engineering sophomore at the University of Pittsburgh with hands-on experience in CAD, prototyping, and embedded systems. Strong background in SolidWorks, Fusion360, and Arduino based mechatronics projects, with a portfolio showcasing all designs and manufacturing work. Passionate about design and manufacturing for innovative solutions.

Education | University of Pittsburgh Swanson School of Engineering | GPA: 3.213

B.S. in Mechanical Engineering, Expected Graduation May 2028

Technical Experience

Additive Manufacturing & Rapid Prototyping | 2019 – Present

- Operate and maintain multiple FDM printers for prototyping functional mechanical components
- Designed and manufactured parts using engineering grade filaments such as ABS, PC, and CF reinforced Nylon
- Iterated designs based on individual criteria focusing on tolerances, strength, and material properties

Freelance Product Design, Fiverr | January 2025 – Present

- Completed a client requested design project using Fusion360
- Communicated design requirements clearly turning them into a functional model while meeting agreed delivery time

Pittsburgh Citi Park's Aquatics, Lifeguard | May 2025 - August 2025

- Ensured public safety in a crowded environment
- American red cross CPR and Lifeguard certified

Projects

IoT Smart Door Lock, ESP, Stepper Motor, Arduino IDE, HTML/CSS

- Designed and built an IoT enabled deadbolt locking system using an ESP 8266 and stepper motor
- Programmed firmware in C to convert web server requests into precise stepper motor motion
- Integrated a basic web interface for remote control and testing

Computer Vision Camera Gimbal, Raspberry Pi, OpenCV, Python

- Designed a pan and tilt camera gimbal in Fusion360
- Computed pixel error from the image center to generate corrective servo PWM signals in python
- Implemented OpenCV commands to autonomously analyze frames and center tracked objects

Soldering Iron Press, Fusion360, Force Simulation, Motion Link

- Designed a mechanical press to control the linear motion of installing heat set inserts into 3D printed parts
- Iteratively designed mechanical mechanisms while testing components and assemblies

Skills

- | | | |
|----------------------|------------|------------|
| - AutoCAD Fusion 360 | - MATLAB | - Inventor |
| - Solid Works | - C/C++ | - Python |
| - Inventor | - HTML/CSS | - Arduino |

Student organizations

Pitt ASCE, 3D printed Bridge

- Worked with team members to determine a design in SolidWorks to meet all competition requirements
- Performed basic structural analysis using material properties of PLA to determine design of components

Leadership Experience

- Highschool Varsity Lacrosse Team Captain (2023-2024)
- Highschool Varsity Wrestling Team Captain (2022-2024)
- ENGR 0012 Group Leader: January (2025)

