Shawn Yong

Email:shawn.yong322@gmail.com | Phone: 3022578301 | LinkedIn:linkedin.com/in/shawn-yong25

EDUCATION

University of Delaware Newark, DE
Bachelor of Mechanical Engineering May 2025
Major: *Mechanical Engineering*
GPA: 3.48
Relevant Coursework: Machine Design, Fluid Mechanics, Statics, Dynamics, Mechanics of Solids, Mechanical Physics, Thermodynamics, Manufacturing and Processes, Engineering Math, Heat Transfer, Computer-Aided Design, Materials Engineering

SKILLS

- Software: Solidworks (including FEA), Fusion 360, ProtoTrak SMX, Python, MATLAB, Arduino IDE, TinkerCAD, Microsoft Office Suite (Word, Excel, VBA, Access), Adobe Illustrator
- Machines: 3D printers, laser cutters, Arduino boards, hand tools, milling machines, CNC, computers, sewing machine
- Languages: Spanish (conversant), Thai (vocally fluent and basic writing), Chinese (basic speaking and writing), Korean (basic speaking and writing)

PROJECTS/EXPERIENCE

Independent Engineering Projects Wilmington, Delaware
Designer/Developer June 2020 - Present

- 3D modelled, machined, and motorized a shoe squeak tester with a team of 3 people for Under Armour for Sr. Design
- Programmed and wired stepper motors with Arduino to dispense pills and screw caps based on sensor input for Jr. Design
- Operated milling machine to make erector set through interpreting engineering drawings and dimensions
- Programmed CNC machine with ProtoTrak SMX to produce custom bottle opener with high dimensional accuracy
- 3D printed molds, casted, routed, and adhered 2 durable polyurethane longboard bumpers
- Developed unique styled shoes designed for wide feet through 3D printing mold components and polyurethane casting
- Diagnosed and fixed 3D printers with software and physical errors
- 3D modeled and printed longboard concave, accounting for grain structure to maximize durability
- Engineered and built two longboards at half the market cost, achieving greater durability and lighter weight than commercial models
- 3D modelled, toleranced, and iterated a 3D-printed manual transmission simulator made to fit car cup holders.

RESEARCH

Center for Composite Materials Newark Delaware
Research Assistant June 2024 - May 2025

- Conducted study about the deconsolidation of thermoplastic composites with the same plastic matrix, but different fibers
- Performed tensile and compression tests while adhering to ASTM testing standards for each unique specimen
- Conducted DSC, confocal microscopy, and thermocouple tests to characterize the composite's properties
- Presented research on thermoplastic composite deconsolidation at symposiums to academic and industry experts.

Skateboard Wheel Durometer Speed & Vibration Study Wilmington, Delaware
Researcher August 2020 - January 2021

- Conducted a comprehensive investigation of the speed and vibration characteristics of various skateboard wheel durometers, resulting in the identification of key properties and factors affecting performance
- Formulated an objective research topic centered on the physical properties of skateboard wheels
- Collected and analyzed data using appropriate measurement tools and software, and utilized data visualization techniques to effectively communicate results

ACTIVITIES

Assistive Medical Technology Newark, Delaware
Designer/Assembler March 2022 - May 2025

- Assisted in building an amphibious water wheelchair specially designed to transport a child with cerebral palsy into a pool
- Made a custom controller to accommodate turning, accelerating, and reversing all with the right arm
- Engineered, assembled, and delivered customized cars for 10 children of varying sizes and abilities within 1 workshop
- Created engineering drawings to clearly communicate functionality and assembly to other team members
- Increase efficiency & quality by dividing work into bite-size tasks for team members to complete