Lenworth "TJ" Thomas

ltjthomas2000@gmail.com – 407.412.4332 – 3542 Domino Ct., Orlando, FL 32805
www.lenthusian.com

Education

Bachelor of Science in Mechanical Engineering, Minor in Electrical Engineering - GPA: 3.3/4.0 **May 2021**
University of Florida – Gainesville, FL
Relevant Coursework – FEA, Fluid Mechanics, Design and Mfg. Lab, Dynamics, Intro. Circuits, Thermodynamics, Eng. Innovation

Industry Experience

Hardware Manufacturing Engineering Intern, Uber Advanced Technologies Group **Postponed to Summer 2021**
Pittsburgh, PA

Product Development Intern – Interior Feasibility, Fiat Chrysler Automobiles **May 2019 – August 2019**
Auburn Hills, MI

- Performed cross sections on future vehicle soft trim CAD and reported 11 part intersections that saved the company around $30,000 per issue
- Lead efforts to resolve major carpet design problems and coordinated physical and VR mockups that led to an official design change by management
- Developed a mechatronic test mechanism to create 3D map of light intensity for interior LEDs that will be a standard test for all interior lighting

Validation Engineering Intern – Commercial Engine Validation, Caterpillar Inc. **June 2018 – August 2018**
Peoria, IL

- Validated prototype 13L engine by troubleshooting error codes and performing engine teardowns ultimately solving a manufacturing flaw
- Aided development of a single cylinder engine test cell by gathering parts, analyzing documents, and taking measurements
- Proposed self-driving solution for intra-facility travel and provided insight on cost, implementation strategies, and routes to management

Product Founder and Hardware Design Intern, Deltamaker 3D Printers LLC **June 2016 – June 2017**
Orlando, FL

- Designed and manufactured a bracket that gives the 3D printers the capability to print with flexible materials
- Developed new auto-leveling system that reduced wear on extruder tip and increased measurement accuracy
- Assembled and laser cut 8 custom acrylic enclosures for local high schools

Leadership Experience

President/Mechanical Lead, InnoGators Design Team **May 2019 – Present**
Gainesville, FL

- Started an organization to make room for minorities and underrepresented students in the maker/design team space
- Managing hardware and software teams to develop an automated filament processor that interfaces with an existing filament recycler for a professor
- Communicating with other minority engineering organizations and companies to build a diverse talent pool of innovators

Chapter Development Chair, National Society of Black Engineers **May 2018 – May 2019**
Gainesville, FL

- Facilitated workshops for academic excellence, entrepreneurship, and 3D printing for the development of the chapter
- Assisted with community outreach and the engagement of the next generation of engineers
- Implemented workshop series where marginalized students learned practical engineering skills through hands on projects

Design and Research Experience

Student Researcher and Paper Co-Author, MicroLIDAR – UF Biophotonics and Microsystems Lab
October 2019 – Present

- Developing battery powered micro LIDAR (Light Detecting and Ranging) by using a mirror actuated by microelectromechanical (MEM) technology
- Programming and wiring electronics to send laser pulses that when reflected by the MEM mirror, creates a 3D point cloud of the environment
- Designing and manufacturing packaging hardware and circuitry to enable portability and scalability of the system

Student/Team Member, Design and Manufacturing Lab – EML2322L **January 2019 – May 2019**
Gainesville, FL

- Designed and manufactured a robot from scratch that successfully sorted 5 tennis balls from 5 golf balls and deposited them in their respective buckets
- Wrote detailed design reports with team of four detailing every aspect of the robot and its functional objectives
- Manufactured robot wheel hubs using engine lathe, column and knee mill, and bandsaw machines

Research Assistant, UF Marine and Aerial Robotics Controls Lab **October 2018 – May 2019**
Gainesville, FL

- Developed laser cut, acrylic brackets for motion capture hardware and soft actuator electronics that resolved cable management issues
- Automated separation process of autonomous submarine by designing a motorized mechanism that reduces wear compared to manual process
- Programmed and wired actuation hardware for separation mechanism that can pull apart sections with 50lbs of force driven by stepper motors