

Education

New York University

New York, NY

B.S. MECHANICAL ENGINEERING, GPA: 3.23/4.0, DEAN'S LIST 2018-2019 (GPA: 3.594/4.0), DEAN'S AWARD (2019)

Aug 2016 - May 2020

- **Organizations:** Othmer Hall Council, American Society of Mechanical Engineers, Society of Asian Scientists and Engineers

Experience

WOOMBA (Dr. Morris Young Outstanding Project Design Award Recipient)

New York, NY

DESIGN ENGINEER

Aug 2019 - PRESENT

- Designed structural components and mechanisms of remotely operated aquatic vehicle (ROAV) in SolidWorks while working with machinist to consider manufacturing methods and restrictions
- Reduced empty weight by 25% by performing static structural analyses of loading components in ANSYS Workbench to meet project specifications
- Developing technical drawings of ROAV components with GD&T for manufacturing (waterjet cutting)

MakerBot Industries

New York, NY

MATERIALS AND TEST ENGINEERING INTERN

Sep 2019 - Dec 2019

- Developed portfolio of specialized material testing data using R studio utilized in print tuning for advancing industrial prototyping capabilities
- Integrated automated LabVIEW program with testing hardware (PID, force gauges, encoders, data acquisition system) to accelerate material testing
- Performed print tuning with Tough PLA using json files to develop optimal settings for dimensional accuracy, print quality, and extruder performance consistency

NYU Dibner IT Innovation Team

New York, NY

SPECIALIZED DESIGN LEAD

Nov 2018 - Apr 2020

- Designed & implemented housing units for Ultrasonic sensors & Raspberry Pi's(RPI) utilized in human detection to predict vacancy of over 500 seats
- Utilized large scale additive manufacturing processes to rapidly accelerate the prototyping phase for hardware testing
- Increased manufacturing volume by 50% by performing design analyses in CatalystEX & Netfabb to optimize 3D printing quality and part size
- Implemented security mechanisms in RPI cases to prevent tampering/theft of over \$1000 of hardware
- Designed and 3D printed components for the Apollo Project while working with Arduinos, PCBs, stepper motors, and servo motors in NYU Library

NYU Aerospace - SAE Aero Advanced Class

New York, NY

MECHANICAL DESIGN ENGINEER AND MANUFACTURING LEAD

Oct 2018 - Apr 2019

- Designed & constructed empennage/tail & wings of aircraft with mechanical fastening features for disassembly while maintaining stable flight
- Redesigned wing box and fuselage components to increase dynamic and static structural stability while reducing weight by 30%
- Performed failure analysis using machine design calculations to optimally decrease rear landing gear weight by over 50%
- Conducted airfoil analysis of primary aircraft to maximize Cl/Cd ratio while minimizing stress concentration from spar contact and hole placement
- Developed technical drawings of aircraft compliant with SAE Aero competition standards

NYU RePrint Bot - Vertically Intergrated Projects

New York, NY

DESIGN ENGINEER

Aug 2018 - Dec 2018

- Designed alignment and fastening features in SolidWorks for the extruder components while minimizing part count and alpha symmetry of parts
- Prototyped extrusion barrels, extrusion screws, and rotational components in SolidWorks and developed engineering drawings for machining
- Collaborated with electrical engineers to design electronic packaging of extrusion heating bands, shredder motor, and control panels with emphasis on ease of user experience and troubleshooting
- Collaboratively sketched multiple iterations of sub-systems to conceptualize final product

Other Projects

- The Apollo Project: ISS and Hubble Telescope Model, Advanced CAD: R2D2, BDI/AEM Manufacturing Analysis of Pepper Mill

Skills

Software SolidWorks, KeyShot, ANSYS Workbench, Netfabb

HTML/CSS, RStudio, MATLAB, Python, LabVIEW, Excel (Pivot Tables), Adobe Creative Suite

Processes Design for Assembly/Manufacturing, Injection Molding, Blow Molding, Waterjet Cutting, Laser Cutting, 3D Printing, CNC Machining, Rapid Prototyping, Sheet Metal Design, GD&T, BDI/AEM Manufacturing Analysis, Topology Optimization

Hardware Various 3D Printers (Stratasys, MakerBot, Ultimaker, Formlabs, Prusa), ShopBot CNC, Epilog Fusion, Arduino, Raspberry Pi, Circuit Boards