

## Education

### New York University

New York, NY

B.S. MECHANICAL ENGINEERING, GPA: 3.27/4.0, DEAN'S LIST (2018-2020)

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 - May 2020

- Designed the framework and mechanical components of a payload carrying electric powered aquatic vehicle tasked with removing surface pollution with the use of SolidWorks
- Reduced empty weight of frame through static structural analysis by over 25% using ANSYS Workbench & SolidWorks Simulations
- Optimized framework design to improve dynamic stability by 70% and surface area for interfaces/attachments by over 100%
- Developed drawings package of WOOMBA assembly and components with Bill of Materials and GD&T for waterjet cutting

### MakerBot Industries

New York, NY

MATERIALS AND TEST ENGINEERING INTERN

Sep 2019 - Dec 2019

- Integrated LabVIEW program with testing jig comprised of PID, force gauges, encoders, & data acquisition box to automate material testing
- Processed and analyzed material testing raw data for over 20 unique 3D printing spools with the use of R Studio and Microsoft Excel, which would be used in understanding material behavior during print tuning
- Performed print tuning for Tough PLA using analyzed testing data to develop optimal printing settings for dimensional accuracy, print quality, and extrusion performance consistency

### NYU Dibner IT (Division of Libraries Dean's Award)

New York, NY

SPECIALIZED DESIGN LEAD

Nov 2018 - Apr 2020

- Contributed to designing and implementing technological enhancements to the library with innovative solutions
- Designed & installed housing units for Ultrasonic sensors utilized in human detection to predict occupancy of over 500 seats
- Increased manufacturing volume of housing units by 50% by performing design analyses in CatalystEX & Netfabb
- Implemented unique security mechanisms in Raspberry Pi cases to prevent tampering/theft of over \$1000 of hardware
- Designed 3D printed parts for an 'Apollo Mission' display powered by stepper motors and Arduino using SolidWorks

### NYU Aerospace - SAE Aero Advanced Class

New York, NY

MECHANICAL DESIGN ENGINEER AND MANUFACTURING LEAD

Oct 2018 - Apr 2019

- Redesigned wing box and payload carrying fuselage after failed test flight to increase structural strength while reducing weight by 30% using SolidWorks Simulations
- Designed removable carbon fiber boom twin-tail of primary aircraft for easier manufacturing and improved control during flight
- Decreased rear landing gear weight by over 50% using ANSYS Workbench & machine design calculations, improving static stability
- Conducted airfoil analysis of primary aircraft to maximize Cl/Cd ratio while minimizing stress concentration from spar contact
- Developed technical drawings of aircraft compliant with SAE Aero competition standards

## Additional Projects

- The Apollo Project, Advanced CAD: R2D2, BDI/AEM Manufacturing Analysis of Pepper Mill, RePrint Bot, 3D Printed Robotic Crane Arm

## Skills

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|--------------------|---|
| <b>Software</b>    | SolidWorks, KeyShot8, ANSYS Workbench   |
| <b>Processes</b>   | DFA/DFM, Design Conceptualization, Design Calculation, Iterative Designing/Continuous Improvement<br>GD&T, Injection Molding, Blow Molding, Waterjet Cutting, Laser Cutting, CNC Machining<br>3D Printing, Rapid Prototyping, Hardware/Product Testing, Root Cause Analysis |
| <b>Languages</b>   | RStudio, MATLAB, Python, LabVIEW, HTML/CSS, JavaScript, Bootstrap   |
| <b>Misc. Tech.</b> | Mac, Windows, BASH, Git, Adobe Creative Suite, Microsoft Office, Raspberry Pi, Arduino  |