NGOC-THAO LY

MECHANICAL ENGINEER
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SKILLS

- **3D Drafting:** SolidWorks, AutoCAD, Inventor, Onshape, GD&T, FEA
- **2D Design:** Adobe Creative Cloud, Paint Tool Sai, Inkscape
- **Programming:** Python, C++, HTML, MATLAB, Simulink, Arduino, Atom
- **Manufacturing:** SolidWorks CAM, 3D Printing, Welding, Laser Cutting & Engraving
- Quality Assurance, Product Development, Assembly, Leadership

EXPERIENCE & PROJECTS

Engineering Apprentice | The Zahn Innovation Center Feb 2019 – Sep 2019

- Worked as a CAD designer in a team-oriented environment, developing prototypes for startup clients
- Designed the outer chassis of an automated running parachute for a client using SW and 3D printing
- Manufactured student commissioned parts using workshop equipment (CNC, CO2 Laser, 3D Printer, etc.)
- Designed mass producible promotional items for public recruitment events
- Carried out regular maintenance on workshop equipment

Mechanical Engineering Intern | Hoplite Power Jun 2019 – Aug 2019

- Designed the sensor holder for the entry module using Onshape and 3D printing
- Post-manufactured and assembled the entry module and battery allocator using workshop equipment (Dremel, Filers, Hand Saw, Fastening Tools)
- Managed bill of materials and organized internal machine components and fasteners as they arrived

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Project Proposal | Combined Cycle Power Plant Oct 2020 – Dec 2020

- Given a set of boundary conditions, created a proposal for the design of a power plant using thermodynamic cycles and technologies learned in class
- Acting lead engineer, overseeing progression, and allocating deadlines while assisting team
- Designed a 2x1 configuration combined cycle plant equipped with HRSG, CSP and emission control
- Authored a written proposal detailing all aspects of the design, including relevant figures and calculations

Product Development | Fire Escape Device Feb 2020 – Dec 2020

- Using purely mechanical elements, designed a fire escape mechanism for residential neighborhoods
- Researched and improved the design of an existing device and analyzed the internal stress using SW FEA
- Created a downscaled prototype of the improved design and tested efficacy through experimentation

Design & Manufacturing | Injection Molder Sep 2019 – Dec 2019

- Designed a mechanical, tabletop injection molder using the machine shop equipment available
- Blueprinted the initial design and allocated the modelling of components to project members
- Designed the mold to be used during the testing of the injection molder using SW and CAM
- Assembled and tested final product before presenting the completed design to an audience

EDUCATION

The City College of New York Feb 2021
Bachelor of Engineering, Mechanical Engineering | 3.32 GPA
Awards: Albert Shanker Scholarship (Fall 2016 – Spring 2020)
Relevant Coursework: Mechatronics, Aerostructures, Energy Systems