NGOC-THAO LY

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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: Advanced Mechatronics, Aerostructures, Energy Systems Design

EXPERIENCE

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

- Worked in a team-oriented, prototyping development environment with a concentration on CAD design
- Created and tested prototypes according to design details provided by clientele
- Tasked with the manufacturing and/or post-manufacturing of in-house projects
- Designed and mass-produced promotional swag for kickoff event

Mechanical Engineering Intern | Hoplite Power Jun 2019 – Aug 2019

- Assisted lead mechanical engineer with the production of new hubs
- Managed and organized bill of materials as new parts were ordered
- Designed entry module components using Onshape and 3D printing
- Post-manufactured and assembled newly ordered hub components

PROJECTS

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
- Performed as the lead engineer, overseeing progression, and allocating deadlines while assisting team members throughout the duration of the project
- Designed a 2x1 configuration combined cycle plant equipped with a HRSG, CSP and emission control equipment
- Authored a written proposal detailing all aspects of the plant proposal including relevant figures and calculations
- Advised team members during the preparation of the final presentation

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 and FEM
- Created a downscaled prototype of the improved design and tested efficacy through experimentation
- Authored two written reports detailing all aspects of the product development process

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

Stress & Failure Analysis | Lag Bolt Analysis May 2019 – June 2019

- Analyzed the locations of highest stress on the bolt screw of a jaw puller
- Ran convergence tests in FEA analysis testing a variety of boundary conditions
- Compared the computerized method results with hand calculations for accuracy
- Oversaw the progression of the project, making sure members were carrying out assigned duties

SKILLS

- **CAD:** SolidWorks, AutoCAD, Inventor, Onshape
- **Programming:** MATLAB, Simulink, Arduino, Atom
- **Manufacturing:** Solidworks CAM, 3D Printing, Laser Cutting & Engraving
- **Photo Editing:** Illustrator, Sketchbook Pro, Inkscape, Paint.NET, Paint Tool Sai