Matthew O'Connor

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EDUCATION

Purdue University, West Lafayette, IN — May 2022
Bachelor of Science in Aeronautical and Astronautical Engineering
GPA: 3.32 / 4.00

Relevant Coursework: Aerospace Design, Engineering Technology, Fluid Mechanics, Thermodynamics
Technical Skills: CATIA, SolidWorks, MATLAB, C++, Written Documentation

AFFILIATIONS

Students for the Exploration and Development of Space (SEDS), *Hybrids Team* — September 2019 – Present

- Coordinated in an Avionics Sub-team of 12 members to develop avionics and recovery systems for the Purdue Space Program Hybrid Propulsion Rocket
- Oversaw creation of a microcontroller-based data acquisition system in the Avionics Bay to promote design improvement through flight data analysis
- Conducted research and selected structural materials meeting and exceeding required design criteria and expectations for high-stress launch conditions

DESIGN PROJECTS

NASA Jet-Trainer Aircraft Analysis and Design, Purdue University — January – May 2020

- Collaborated in a small team to identify customer needs, requirements, and stakeholders for a cost-effective supersonic NASA jet-trainer aircraft
- Generated preliminary risk analysis and design analysis with ideal selection using in-depth computational and graphical optimization methods in MATLAB
- Thoroughly documented design process in a team-coordinated comprehensive technical report of aircraft development and final design

CATIA Product Reverse Engineering, Purdue University — August – December 2019

- Identified and reverse engineered industry standard hardware to recreate and model a chosen consumer product in CAD
- Utilized CATIA to accurately model complex features and geometry utilizing measured and researched product component dimensions
- Generated sophisticated Multiview production drawings complying with industry standards and accurately animated digital product mockups

MATLAB Thermocouple Design Analysis, Purdue University — August – December 2018

- Developed recursive algorithms to assess noisy technical data for a client and constructed piecewise regression models in MATLAB with algorithm data
- Applied devised models to evaluate large data sets provided by client and determined an optimal cost-benefit analysis for client products
- Reported technical briefs to client outlining algorithm development and findings regarding product consistency and pricing to improve designs

WORK EXPERIENCE

Fresh Market, Geneva, IL — June 2019 – Current
Seasonal Produce Clerk

- Provided quality customer service for pricing, produce, and store products
- Cooperated with department team to efficiently organize, stock, and rotate store displays to ensure freshness of produce
- Managed department and maintained store safety and policy during closing hours