Pranav Srinivasan

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Education

University of Maryland – A James Clark School of Engineering — **College Park, MD**
Bachelor of Science, Mechanical Engineering — **Graduation Date: December 2024**
Minor: Robotics and Autonomous Systems
Cumulative GPA: 3.78
Engineering Honors Program — Citation Date: December 2024
College Park Scholars: Science, Discovery, and the Universe — Citation Date: May 2023

Technical Experience

University of Maryland — **College Park, MD**
NSF Research Intern — May – August 2023

- Designed flexible hull for Arctic buoy that reduces g-force upon impact when dropped off a flight
- Designed and fabricated testing kit with accelerometer and gyroscope to conduct drop tests for flexible hull design and other impact reduction mechanisms
- Generated graphs from accelerometer data to study moment of impact from drop testing
- Fabricated prototypes of flexible hull using TPU for testing, and used test kit with accelerometer to measure impact forces from drop tests
- Conducted extensive FEA analysis on various components for different hull components to simulate impact forces from 500 ft moving drop from flight

Baltimore Aircoil Company — **Jessup, MD**
Engineering Systems Intern — May – August 2022

- Redesigned BAC's Pre-Punch system, which generates hole patterns on sheet metal parts of cooling tower using customer input data, to edit 3D Inventor part files instead of 2D AutoCAD .dxf files
- Used Inventor API with VB.NET and Inventor automation tools such as iLogic and iFeatures to automate hole generation
- Wrote program to identify key triggers to generate specific hole patterns, and created matrix with standardized hole size and placement data
- Created separate matrix for custom panel connections that can be generated at customers' request
- Automated drawing generation, including dimensions and meeting all BAC drawing standards, and export of .pdf drawings and .dxf files for manufacturing

Johns Hopkins University Applied Physics Laboratory — **Laurel, MD**
ASPIRE Intern — September 2020 – May 2021

- Explored the popular data anonymization method k-anonymity and its extensions l-diversity and t-closeness to protect individual privacy in health data
- Generated a randomized COVID-19 vaccine record dataset using Python to simulate real medical data
- Modified existing k-anonymity program to anonymize COVID vaccine record dataset
- Nominated and selected to present project at the APL ASPIRE Showcase and gave a 5-minute lightning talk to APL staff and other ASPIRE interns

Skills & Certifications

Programming/Software: C++, C, VB.NET, Python, ROS, MATLAB, HTML, CSS, Arduino, Ubuntu, Microsoft Office, Inventor API
Computer Aided Design: SolidWorks, Autodesk Inventor, Autodesk Fusion 360, Siemens NX, AutoCAD, Thermal Desktop
Manufacturing: 3D Printing, CNC Machining, Waterjet Cutting
Certifications: Certified SolidWorks Associate (CSWA) - February 2022

Activities

SEDS@UMD — **College Park, MD**
THEIA Team – Structures/Thermals Subteam Lead — September 2022 – Present

- Creating and delegating tasks to 7 members in subteam, organizing weekly meetings, communicating results to team leads
- Setting up and running quasi-static and modal FEA analyses to simulate acceleration loads CubeSat experiences during launch
- Designing mounts for payload (both for event camera and startracker) and for ADCS startracker