

Pranav Srinivasan

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Education

University of Maryland – A James Clark School of Engineering

Bachelor of Science, Mechanical Engineering

Minor: Robotics and Autonomous Systems

Cumulative GPA: 3.73

Engineering Honors Program

College Park Scholars: Science, Discovery, and the Universe

College Park, MD

Graduation Date: December 2024

Citation Date: December 2024

Citation Date: May 2023

Technical Experience

University of Maryland

NSF Research Intern

College Park, MD

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

Engineering Systems Intern

Jessup, MD

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

ASPIRE Intern

Laurel, MD

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