# Rafi Khan

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## Education

**The Ohio State University** | December 2024
B.S. Mechanical Engineering | **GPA**: 3.67/4.0

## Experience

**SpaceX,** Hawthorne, CA | May 2023 − August 2023
*Supply Chain Reliability Intern*, Starlink Aviation

- Implemented high-voltage testing of Starlink harnesses for the first time in the department. Owned all the processes from test hardware setup, fabrication, programming, and its implementation in the reliability lab.
- Uncovered novel defects when performing tests per Federal Aviation Administration (FAA) requirements
- Led the assessment of the technical qualifications of a Starlink Aviation supplier. Identified gaps in the production process by analyzing manufacturing techniques and corrected the tensile-strength tests under IPC-620 standards (Requirements and Acceptance for Cable and Wire Harness Assemblies)
- Identified a non-conformance (NC) on over 3000 in-stock harnesses planned for installation on Airbus A320s, placing NCs into containment and passing FAA certification

**General Electric Aerospace,** Dayton, OH | September 2022 − December 2022
*Manufacturing Engineering Intern*, Aviation Systems

- Hands-on experience working in the New Product Integration Lab for the Hybrid Aircraft high-voltage (1500 V) power converters
- Reviewed drawings and design requirements to assemble complex electrical units and created work instructions for future assemblies
- Designed and fabricated a jig to screen print sensitive semiconductor modules with thermal paste. Leveraged prior work experience at Denso to ensure the process was repeatable
- Worked alongside engineers and technicians and was mentored in fabricating fiber optic cables, aircraft harnesses, and IPC-610 Standard Soldering

**Denso,** Maryville, TN | May 2022 − August 2022
*Process Design Intern*

- Responsible for optimizing a high-volume automated production line of computer modules used in 90% of General Motor vehicles
- Designed a calibration box using SolidWorks to reduce downtime in final packaging and save on average $2000 per production day
- Participated in Kaizen activities and conducted process capability analysis studies (Cpk) to ensure high repeatability

## Project

**Personal: Thrust Vector Controlled Model Rocket** | https://rafikhan3.github.io

- Designed a Thrust Vectoring Control (TVC) mount in SolidWorks with 2-axis gimbaling to control a rocket's trajectory during flight
- Used an IMU (Inertial Measurement Unit) to obtain the rocket's orientation and used Simulink to tune a PID controller for a stabilized flight

## Skills

**Software:** SolidWorks, HSMWorks (CAM), Ansys, LabVIEW
**Manufacturing:** Basic Machining, Composite layups, Soldering, 3D Printing (Carbon Fiber, Rubber Filament, etc)
**Programming:** MATLAB, Simulink, Java, Arduino (C++), G-Code
**Technical Hobbies:** High-Performance Drone Fabrication, Autonomous RC Airplane Flight