Rafi Khan

rafialamkhan1@gmail.com | 614-795-6952 | U.S. Citizen

Education

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

Experience

SpaceX, Hawthorne, CA May – 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. Test results exceeded FAA requirements
- Led the technical qualification for two Starlink Aviation harnesses. Identified gaps in the production process and made process improvements according to IPC-620 Standard
- Identified a non-conformance in Aviation harnesses missed by two other full-time employees. As a result, ~3000 harnesses, valued over $250,000, were placed in containment. This helped the Starlink program to pass FAA certification for A320 aircraft

General Electric Aerospace, Dayton, OH September – December 2022
Manufacturing Engineering Intern, Aviation Systems

- Hands-on experience working in the New Product Integration Lab for 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 optics cable, aircraft harnesses, and IPC-610 Standard Soldering

Denso, Maryville, TN May – August 2022
Process Design Intern

- Responsible for optimizing a high-volume automated production line of computer modules used in 90% of General Motors 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

Thrust Vector Controlled Model Rocket

- Designed a Thrust Vectoring Control (TVC) mount in SolidWorks with 2-axis gimbaling to control a rocket's trajectory during flight
- Programmed a PID controller and used Simulink to tune the controller for a stabilized flight

Skills

Software: SolidWorks, Inventor, Ansys, LabVIEW,
Manufacturing: Basic Machining, composite layups, soldering, 3D Printing (Carbon Fiber, Rubber Filament, etc)
Programming: MATLAB, Simulink, Java, Arduino, G-Code
Prototyping/Technical Hobbies: High-performance drone fabrication, autonomous RC airplane flight