
EDUCATION**Duke University, Pratt School of Engineering***Bachelor of Science in Mechanical Engineering***Durham, NC***Aug' 22- May' 26*

- **GPA:** 3.53
- **Engineering Merit Scholarships :** Dorcas Maynor and E. Ray Bucher, Jr. Scholar, Bee-Keng Boey Scholar
- **Relevant coursework:** Aircraft Performance, Materials Engineering, Differential Equations, Fluid Mechanics.
- **Leadership:** Treasurer, Duke Cycling: Effectively manage club's budget of \$20K. Organized fundraising events. Duke Aviator's Club: Built aircraft simulator to teach those interested. Teach ground school lessons weekly.

WORK EXPERIENCE & PROJECTS**Mechanical Engineering Intern | Trio Labs | Durham, North Carolina***May'25 – Aug'25*

- Increased productive capacity by 25%
- Created new chemical transfer process, increasing efficiency by 90%
- Devised and conducted tests on new printers to troubleshoot issues before commissioning, increasing production by 50%

Mechanical Design Engineering Intern | Safran and Hindustan Aeronautics Ltd | Bengaluru*May'24 – Aug'24*

- Analyzed various compressor blade designs and the materials used in aircraft engines on to understand their impact on performance and durability.
- Researched potential new alloys and metals for use in compressor blades and combustion chambers to enhance heat resistance and reduce manufacturing costs.
- Gained hands-on exposure to turbine engine manufacturing processes and the challenges associated with material selection for high-temperature environments.

Chassis Design and Assembly Engineer | Duke University Motorsports*Aug '23 - Present*

- Designed and manufactured support jigs to precisely hold chassis tubes in place during welding, improving assembly accuracy and structural integrity.
- Created detailed engineering drawings of pedal box tubes in SolidWorks to document specifications and ensure compliance with FSAE regulations.
- Utilized CNC machining techniques to enhance the build quality of the Brake Pedal Box and ensure precision in component fabrication.

Aeroelasticity Lab Research Assistant | Duke University*Apr '24 - Present*

- Conducted experimental and computational analysis of flexible riblet designs to study drag reduction mechanisms in turbulent flow
- Fabricated riblet samples using 3D printing, laser cutting, and soft materials; performed wind tunnel tests with load cell instrumentation and automated data logging
- Utilized CFD tools (ANSYS Fluent, FUN3D) to model steady flow with various turbulence models; validated baseline cases and documented repeatability and uncertainty.

Materials Science Lab Research Assistant | Volker Blum Lab | Duke University*Jan '23 - July '23*

- Conducted research on chalcogenides and oxide perovskites to identify potential materials with suitable band gaps and industrial scalability for replacing silicon in solar cells.
- Maintained and updated the Muchas database, a globally accessible research tool, ensuring accurate documentation of candidate materials for use by researchers worldwide.
- Utilized DataGrip, MySQL, and GitHub repositories to manage and organize large datasets, improving accessibility and efficiency in data retrieval.

SKILLS & INTERESTS**Technical:** *Software* [Python, MATLAB, SolidWorks, Fusion360, MS Office, Ansys, AutoCAD]*Engineering* [Private Pilot's License, Arduino, Geometric Dimensioning & Tolerancing(GD&T), Tolerance Analysis, Engineering Drawings, Computational Fluid Dynamics, Finite Element Analysis]*Manufacturing* [Kaizen & Lean Manufacturing, CNC Machining, Injection Moulding, Prototyping, Water Jetting]**Languages:** Japanese(Beginner), Spanish (Intermediate), French (Fluent), Hindi (Fluent), Kannada(Native)**Interests:** Roller and Ice Speed Skating(All India #3), Road Cycling, Cricket, Aviation, Pickleball, Photography