

EDUCATION

Master of Science in Aerospace Engineering

May 2023

Arizona State University, Tempe, AZ, USA**Bachelor of Technology in Aerospace Engineering**

May 2020

SRM Institute of Science & Technology (KTR), Tamil Nadu, India

WORK EXPERIENCE

Baxter (Contract)-R&D Mechanical Engineer

September 2023- Present

- Led **10+** Test Protocols and **5+** Test Method Validations for mechanical devices, including fixtures and gauges.
- Managed **100+** DHF documents with PLM software, ensuring compliance and traceability.
- Conducted **3+** design reviews (DFMEA, PFMEA), improving documentation efficiency by **15%**.
- Spearheaded V&V testing across multiple product lines for regulatory compliance.
- Supported DFMEA, RM, NPI, CO, and MCO processes, streamlining product release cycles.
- Developed **5+** prototypes and design drawings in AutoCAD, driving product innovation.
- Enhanced design transfer efficiency by **20%** through improved documentation and team coordination.
- Delivered presentations and technical reports for alignment across engineering, quality, and production teams.
- Collaborated on DFA and DFM principles with manufacturing, reducing assembly errors by **10%**.
- Managed and updated BOMs for **5+** products, ensuring accurate documentation and material traceability.

Solinst Canada Ltd-Mechanical Engineer Student

July 2023-August 2023

- Designed **5+** mechanical packer models using SolidWorks for boring hole applications.
- Conducted **10+** CFD simulations, improving design efficiency by **12%**. Validated 3D models for form, fit, and function across multiple design iterations.

Air India Limited-Intern

May 2018-July 2018

- Overhauled & assembled compressor module of PW4056 to optimize the work by **10%**.
- Completed inspection of GE-90 with AMEs, utilizing Nondestructive techniques for unknown defects.
- Assembled combustion chamber of CFM 56 & enhanced engine performance by **5%**.

PROJECTS

Manufacturing Innovation Lab-Research Student

October 2021- May 2023

Thermoelectric Material Fabrication using Stereolithography Integrated with Hot Pressing.

- Designed **10+** thermoelectric molds, optimized sample density by **20%**, and validated materials through TGA testing.

Physical modeling and simulation of polymeric structures with metallic material for property enhancements

- Simulated **9+** designs in COMSOL, built 400µm copper-deposited structures, and validated properties using SEM & EDS analysis.

SRM Institute of Science & Technology-Research Student

January 2019-May 2020

Analysis of acoustics of jet flow using a conditioning assembly for different Mach Numbers.

- Designed nozzles (**M=1–2.5**) and analyzed jet flow acoustics across NPR **1–3**, observing screech patterns at Mach 2.5

Multi-Disciplinary Design-Aircraft design

- Created a 3D aircraft model using Catia V5, achieving a maximum speed of **M=1.8** and improving efficiency by **3–4%** through simulations.

SKILLS

CERTIFICATIONS- Digital Manufacturing, CAD/CAM/CAE for Mechanical Engineering, Lean Six Sigma Green Belt**DESIGNING-** AutoCAD, SOLIDWORKS, CATIA V5, Solid Edge, Fusion 360, Revit**SIMULATION-** Ansys, COMSOL Multiphysics, Creo, Siemens NX, Abaqus**PROGRAMING-** MATLAB, Python**SOFTWARES-** Origin, EndNote, CHITUBOX, JMP, Minitab, Keyshot

PUBLICATIONS

1. Tang, T., Joralmon, D., Tiwari, L., Ravishekar, R., He, Q., Pham, L., Yang, Y., Li, X. Additive Manufacturing of Polymer Matrix Composites. Woodhead Publishing, 2024. [LINK](#)
2. Tiwari, L., & Li, X. Physical Modeling and Simulation of Polymeric Structures with Metallic Material. ASU Master's Thesis, 2023. [LINK](#)
3. Tiwari, L., Tang, T., Rong, J., et al. Thermoelectric Material Fabrication Using Mask Image Projection. J. Mater. Sci. Tech. Res., 2022. [LINK](#)
4. Dubey, P., Pramod, M.Y., Tiwari, L., & Kannan, B.T. Preliminary Aero acoustic Measurements of Conditioned Jet Flow. IOP Conf. Ser.: Mater. Sci. Eng., 2020. [LINK](#)