Saahil A. Joshi

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EDUCATION

Rutgers University **New Brunswick, NJ**
B.S in Mechanical Engineering with Aerospace Concentration Graduation Date: May 2026
Relevant Courses: Heat Transfer, Mechanics of Materials, Fluid Mechanics, Aerospace Propulsion, Design Mechanical Components, Thermodynamics, Aircraft Flight Dynamics

WORK EXPERIENCE

Metal Additively Manufactured Liquid BiPropellant Rocket Engine **Parsippany, NJ**
Injector Manufacturing & Responsible Engineer *September 2025- Present*

- Design and manufactured a flight ready pintle injector fuel manifold that assists the engine to produce 750 lbf with a specific impulse of 1956 N*s/kg
- Performed torque bolt calculations to properly size bolts between thrust chamber and pintle to reduce overall bolt count between the thrust chamber and pintle head by 55%
- Create Solidworks CAD drawings for pintle fuel manifold while maintaining proper GD&T practices

Marotta Controls - Space Business Unit **Parsippany, NJ**
Process Engineering Intern *May - August 2025*

- Characterized Poppet Testing fixture performance to certify a special process that validates critical sealing components saving 10+ minutes per assembly
- Performed structural and pneumatic high-pressure and Instron validation testing on company produced valves sent to SpaceX and Blue Origin and compared it to the new fixture to determine force to seal, force margin, and seat load values
- Released a formal test procedure for the pneumatic fixture used to validate high-pressure internal sealing component performance
- Inspected, categorized, and maintained cleanliness to critical sealing components with defects while maintaining compliance with handling protocols
- Designed a tool in Creo that makes its easier to torque down a retaining sleeve while in the fixture

Rutgers Formula Racing **New Brunswick, NJ**
Powertrain Engineer *September 2022 - Present*

- Designed the drivetrain that reduced the overall assembly weight by 50% and verified structural loads up to 2400 lbf through Solidworks FEA and hand calculations
- Executed ANSYS CFD simulations of the battery pack of the evaluating airflow distribution, pressure drop and heat transfer for improved cooling
- Designed an outboard testing rig for electronics to troubleshoot issues in the tractive battery
- 50+ hours of CAM and machining on a CNC Lathe and mill to create chassis jigs, brake pedal face, pedal bar and throttle pedal mount while applying GD&T standards for consistent assembly alignment

Siemens Healthineers **Flanders, NJ**
Rapid Prototyping Engineering Intern *May - August 2024*

- Designed and additively manufactured a mechanical support tool with Siemens NX and Cura to restrict a FaroArm to restrain it during sudden and random movement
- Performed mechanical maintenance on the Prusa i3 MK3 and MarkForged Mark 2 to resolve issues with the extruder that delayed additive manufacturing jobs
- Operated manual mills and lathes for 400+ hours completing manufacturing jobs by design engineers
- Utilized Design for Additive Manufacturing (DFAM) skills through multiple 3D printing projects using softwares including as Eiger and Cura to optimize the overall printing process of the workpiece
- Preformed Rockwell Hardness Tests identify the failure modes of the part and determine the material

Learning Assistant Program **New Brunswick, NJ**
Student Learning Assistant *September 2024 - Present*

- Facilitated precalculus classrooms and physics labs by incorporating hands-on techniques in order to promote active learning and enhanced student learning through various pedagogical techniques

TECHNICAL PROFICIENCIES

Matlab | TeamCenter | Google Workspace (Docs, Sheets, Slides) | Python | Jira | GD&T ASME Y14.100