Samir Kadri

Toronto, ON | samir.kadri@mail.utoronto.ca | +1 (437) 974-5360 | linkedin.com/in/samirskadri | samirkadri.github.io

Professional Summary

- Mechanical engineering graduate student with a year of experience in a biomedical device startup as an R&D Mechanical Engineering Intern, working on mechanical design and rapid prototyping
- Experienced in CAD tools (CATIA, SolidWorks, AutoCAD) using DFM principles, & producing GD&T-based drawings
- Familiarity in simulation, manufacturing, & quality tools (FMEA, SPC) gained through coursework and project work
- Strong multi-disciplinary background across structural, biomedical & thermo-fluid design, analysis & manufacturing

Education

University of Toronto, MEng in Mechanical and Industrial Engineering   Sept 2024 – May 2026
GPA: 4.0 | *Coursework: Finite Element Method, Forensic Engineering, Computational Fluid Mechanics & Heat Transfer*

University of Mumbai, BTech in Mechanical Engineering   Feb 2021 – June 2024
GPA: 3.7 | *Coursework: CAD-CAM, Mechanical Measurements, Structural Mechanics, Manufacturing Science & Tooling*

Experience

Flow Robotics, Mechanical Engineering Intern – Toronto, ON   Sept 2024 – Sept 2025
- Designed mechanical subsystems of a gastrointestinal device using Fusion360, ensuring assembly & tolerance control
- Built & iterated 3D-printed prototypes, identifying alignment & clearance issues, & implementing corrective updates
- Worked closely with founders and regulatory team to ensure product compliance with FDA regulations
- Aided in the preparation of the 2025 Desjardins Startup Prize competition pitch deck where the team placed First

TATA Motors, Project Intern – Pune, India   June 2023 – Sept 2023
- Evaluated suspension architectures with a focus on handling, layout and component interaction considerations
- Supported multidisciplinary design reviews by delivering layout, compliance, and packaging analysis

Polyvault Shelters, Product Design Intern – Mumbai, India   June 2021 – Sept 2021
- Designed automotive products in SolidWorks & ANSYS, increasing design safety margins & manufacturing scalability
- Created detailed fabrication drawings and GD&T documentation, improving cross-disciplinary workflow efficiency

Projects

University of Toronto Formula Racing FSAE, Aerodynamics & Suspension Senior   2025 – Present
- Designed rear suspension uprights using topology optimization for in-hub motors, for 3-axis CNC manufacturability
- Designed front wing & nosecone with topology-optimized mounts, contributing to a 23.3% performance increase
- Produced engineering drawings with GD&T for designed components, ensuring accurate CNC/composite fabrication

Trubulence Research Laboratory (University of Toronto), MEng Project   2025 – Present
- Developing a CFD-based Spark-Jet actuator model to simulate jet velocity, temperature rise, & flow reattachment
- Executing COMSOL Multiphysics models on HPC clusters for enhanced computation efficiency and model accuracy

CFD Solver for 2D Lid-Driven Cavity   2025
- Developed a Python CFD solver implementing SIMPLE to solve 2D incompressible Navier–Stokes equations

Gear & Power Transmission Laboratory (Ohio State University), Capstone Project   2024
- Developed a 3D stochastic microcontact model on MATLAB for the friction coefficient in line and elliptical contacts

VJTI AIAA Design/Build/Fly, Structures Senior   2023 – 2024
- Designed & manufactured topology-optimized fuselage & wing structures using SolidWorks & ANSYS
- Designed the mechanism for a foldable set of wings, for taxi in smaller spaces to adhere to competition rules

VJTI Racing SAE eBAJA, Suspension & Vehicle Dynamics Senior   2021 – 2024
- Developed the Hardpoints, & designed the front uprights, using Leosoft Lotus Shark, ANSYS & Solidworks
- Manufactured the suspension package, by machining various components, & coordinating machining of the uprights

Skills

CAD: CATIA, SolidWorks, Fusion 360, AutoCAD
Programming: Python, MATLAB
Other: Ansys Mechanical, MSC Adams, Ansys Fluent, STAR-CCM+, COMSOL, HPC Workflows, Leosoft Lotus Shark