

Angadbir Khurana

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PROFILE

Self-motivated Engineer with a passion for efficient problem-solving and sustainability. I've had experience in machining and 3D CAD through extracurricular involvements and projects.

EDUCATION

NC State University

Raleigh, NC

Bachelor of Science - Mechanical Engineering

May 2025

Relevant Coursework: Fluid Dynamics, Thermodynamics 2, Strength of Mechanical Components, Heat Transfer

SKILLS

Programs: Solidworks, MATLAB, FEA in Ansys, Microsoft Office Suite

Languages: Java (intermediate)

PROJECTS

Multi-Function Camping Device

April 2022

Freshman Engineering Design Day (FEDD)

- Tasked with 3D printing a two-function outdoor/camping device.
- Created a device that functioned as both a fan and a flashlight with over 90% 3D printed parts
- Placed 1st in our category.

Mechanical Analysis of the Titanic Disaster

Nov. - Dec. 2023

MAE 316 (Strength of Mechanical Components) Final Project

- Analysed the damage to the ship's hull using mechanical properties learned in class like yield stress and factor of safety.
- Created CAD drawings of the hull's steel plate and rivets using available designs of the Titanic's construction.
- Performed structural and dynamic FEA analyses in Ansys. Demonstrated the brittle to ductile transition of the steel due to water temperature and its impact on the factor of safety.

Effect of Aerodynamics on Cornering Speed in an F1 Car

Nov. - Dec. 2023

MAE 208 (Engineering Dynamics) Final Project

- Researched the effects of aerodynamic devices like the front and back wings on the speed of an F1 car around a corner.
- Conducted a mathematical analysis using EOMs to compare the maximum speed around a corner with and without aerodynamic devices.
- Found that downforce from the wings results in faster cornering speed due to increased traction.

ON CAMPUS INVOLVEMENT

Pack Motorsports Club

August 2023 - December 2023

Manufacturing

- Student-led Formula SAE racing club. Designs, analyzes, and builds a formula-style race car.
- 7 subsystems - chassis, suspension, IC powertrain, EV powertrain, aerodynamics, electronics, and manufacturing
- Responsible for machining parts like jigs and spacers on the mill and lathe for larger assemblies.
- Learning to take initiative in my field and further learning to function in a team while maintaining attention to detail efficiently.

WORK EXPERIENCE

NC State University Housing

Raleigh, NC

Summer Conference Ambassador

May - August 2023

- Helped Housing with organizing and facilitating the stay of various camps and conferences during the summer.
- Learned critical skills in leadership, collaboration, and communication by assisting 10000+ people over three months.