# Raheel Nazir

## Lutherville-Timonium, MD

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## Education

# University of Maryland Transfer Program

Bachelor of Science in Mechanical Engineering

Expected May 2027

College Park, MD

Baton Rouge, LA

## Community College of Baltimore County

Associate of Science in Engineering

Jan. 2023 – Present

Essex, MD

- President's List Recipient Winter 2024 GPA: 4.00
- Dean's List Recipient Spring 2024 and Summer 2024 GPA: 3.70 and 4.00
- Digital Fabrication Lab Professional

## Louisiana State University

Bachelor's of Science in Engineering

Aug. 2023 – Dec. 2023

• Dean's List Recipient — Fall 2023 — GPA: 3.60

## **Technical Skills**

Tools: AutoCAD, Excel

Programming Languages: MATLAB, HTML/CSS

# **Projects**

Tire Force Model Nov. 2024

- Studied a real-world application of multi-variable calculus involving Pacejka's Magic Formula, which models the forces acting on a car's tires.
- Implemented the formula in MATLAB, using actual tire data to calculate lateral and longitudinal forces in different conditions.
- Validated the results by comparing them to empirical tire test data, ensuring accuracy in force predictions.

#### Spacecraft Design & Analysis

Apr. 2024

- Designed a spacecraft the size of a U.S. aircraft carrier using AI-driven tools.
- Modeled the spacecraft in **AutoCAD**, adhering to industry-standard tolerances and geometric dimensioning to ensure precision and reliability.

## 24 Hours of Lemons | Endurance Racing Competition

Oct. 2023

- Restored and modified a 1966 Dodge Coronet to compete in an endurance race while complying with a \$500 budget.
- Installed and repaired engine components to ensure the vehicle was race-ready.
- Collaborated with others to source affordable parts and optimize vehicle performance.

## Extracurriculars

# TigerRacing FSAE

Fall 2023 - Winter 2023

Louisiana State University

Powertrain/Chassis Technician

- Assisted in the design and development of engine components using CAD software.
- Helped assemble and fit parts of the car's chassis, ensuring they met competition requirements.
- Provided general support across stages of the car-building process in a fast-paced team environment.

#### Hiking Club

Event Coordinator

Spring 2025 – Present

Community College of Baltimore County

• Organized and led hiking events, coordinating logistics and ensuring participant safety.

- Managed communication between club members and local parks services to facilitate group sessions.
- Developed promotional materials and social media content to increase club engagement.

### Experience

## Al-Kareem School

May 2022 - Present

Teacher

Lutherville-Timonium, MD

- Provided individual support to 50+ students, adapting teaching techniques to meet various learning styles.
- Supported classroom management and activities, ensuring a positive and productive learning environment.