

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

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

Baton Rouge, LA

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

Technical Skills

Technical Skills: AutoCAD, Excel

Programming Languages: MATLAB, HTML/CSS

Interpersonal Skills: Positive Influence/Leadership in Team-Based Environments, Conflict Resolution, Attention to Detail

Projects

Engineering Design – Team Lead | *AutoCAD*

May 2024

- Designed a spaceship the size of a U.S. aircraft carrier using **AI-driven tools**, focusing on modularity and efficiency for space assembly to optimize structural integrity and ease of construction in orbit
- Used AutoCAD to create detailed blueprints of modular components, ensuring precision and compatibility for orbital assembly by implementing industry-standard tolerances and geometric dimensioning and tolerancing (**GD&T**)
- Conducted structural and thermal analyses to optimize the spaceship's design for extreme space conditions by simulating load distributions, thermal expansion, and stress points in various space environments

Pendulum Model | *Discrete Math*

December 2024

- Applied multivariable calculus to model the motion of a pendulum under varying forces by formulating differential equations and solving complex integrals to analyze system behavior
- Utilized advanced calculus techniques such as partial derivatives and **Jacobian matrices** to study the impact of external forces on pendulum motion and identify equilibrium points
- Simulated pendulum motion using numerical methods and computational tools to visualize phase trajectories and predict oscillatory behavior under different initial conditions

Extracurriculars

Hiking Club

Spring 2025 – Present

Event Coordinator

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.

TigerRacing FSAE

Fall 2023 – Winter 2023

Powertrain/Chassis Technician

Louisiana State University

- 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.

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.