Raheel Nazir

Lutherville-Timonium, MD
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Education

University of Maryland Transfer Program **Expected May 2027**
Bachelor of Science in Mechanical Engineering *College Park, MD*

Community College of Baltimore County **Jan. 2023 – Present**
Associate of Science in Engineering *Essex, MD*

- President's List Recipient — Winter 2024 — GPA: 4.00
- Dean's List Recipient — Spring 2014 and Summer 2024 — GPA: 3.70 and 4.00
- Digital Fabrication Lab Professional

Technical Skills

Technical Skills: SolidWorks, AutoCAD, CATIA, Revit
Interpersonal Skills: Positive Influence/Leadership in Team-Based Environments, Conflict Resolution, Attention to Detail
Programming Languages: MATLAB, C++

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

Statics Structure | *Finite Element Analysis (FEA)* **December 2024**

- Completed a project analyzing static equilibrium of a structure, calculating forces and moments to ensure stability and safety.
- Used engineering software to simulate and visualize forces acting on the structure.
- Presented findings in a report, showcasing problem-solving and technical communication skills.

Leadership / Extracurricular

Rock Climbing Club **Spring 2025 – Present**
Event Coordinator *Community College of Baltimore County*

- Organized and led climbing events, coordinating logistics and ensuring participant safety.
- Managed communication between club members and local climbing gyms 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*

- Assisted in developing and delivering lesson plans, helping students understand key concepts in subjects such as mathematics and science.
- 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.