

# MUHAMMAD ALI GULFAD

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• [LinkedIn](#) • [Portfolio](#)

## EDUCATION

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### NED University of Engineering and Technology — Karachi, Pakistan

Bachelor of Engineering in Mechanical Engineering | 2021 – 2025

### Government College for Men — Karachi, Pakistan

Intermediate in Pre-Engineering | 2019 – 2021

## PROFESSIONAL EXPERIENCE

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### Artistic Milliners — Karachi, Pakistan

Engineering Intern | March 2025

Artistic Milliners is a multinational denim manufacturer based in Pakistan since 1949.

- Gained practical experience operating and maintaining steam-generating boilers and chilling systems in an industrial setting. While also observe utility department operations and denim washing systems.
- Examined methods for performance monitoring and fault analysis when integrating new industrial equipment.

### Pakistan Airports Authority (PAA) — Karachi, Pakistan

Engineering Intern | March 2024 – April 2024

The Pakistan Airports Authority is the regulatory body overseeing aviation safety, security, and air traffic management in Pakistan.

- Assisted in the maintenance and troubleshooting of escalators and elevators at Karachi airport.
- Observed and gained practical knowledge of HVAC system operations, including temperature and airflow management.

## ACADEMIC EXPERIENCE

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### INVESTIGATION OF MECHANICAL PROPERTIES OF VARIOUS CLAY MINERALS(FYDP)

Project Group Leader | August 2024 – June 2025

- Developed and ran LAMMPS scripts for simulating nanoindentation on clay minerals.
- Analyzed atomic deformations to determine hardness and surface energetics.
- Led a team of 4 members to validate computational outputs using AnyChart and Excel.

### Semester Projects

- Ansys design and simulation of a cantilevered beam with an I cross section that is safe, economical, and able to support the highest loads.
- Created a sensor-based, automated parking system with real-time monitoring.
- Estimates the annual operating costs, energy needs, and cooling load for commercial office space.

## EXTRACURRICULAR & VOLUNTEER EXPERIENCE

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### Co-Leader | Team Uraan — Propeller RC Aircraft Competition | 2024

- Designed propellers using SolidWorks 3D modeling, conducted FEA and CFD simulations using ANSYS, and coordinated manufacturing and fabrication — contributing to the first circular fuselage and winglet design in competition history.

### Co-Lead | IMechE Propeller Event | 2025

- Coordinated planning and execution of the design competition as a key member within the NED IMechE student chapter.

### Volunteer | Global Conference (GCGC) | 2025

## HONORS & CERTIFICATIONS

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- SolidWorks Certification by ASHRAE — 2025
- ANSYS Computational Fluid Dynamics — CCEE, NED Academy (2024)

## SKILLS & ADDITIONAL

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**Technical:** SolidWorks (3D Modeling & Assembly), ANSYS Mechanical (FEA / Structural Analysis), ANSYS Fluent (CFD), LAMMPS, AutoCAD, MS Office, Engineering Drawing, Python (Basic)

**Soft Skills:** Problem-solving, Teamwork, Leadership

**Interests:** Design, Aeronautics, Aviation

**Languages:** Urdu (native), English