Muhammad Hamza Khalid

ID: 36302-3645721-7 | **Work permit:** Pakistani | **Date of birth:** 01/01/2003 |

Nationality: Pakistani | **Email:** mhamzakhalid53@gmail.com | **Website:**

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ABOUT MYSELF

Final-year Aerospace Engineering student with experience in CAD design, 3D modeling, structural analysis, and aerodynamic simulation. Skilled in CATIA, SolidWorks, ANSYS, MATLAB, and related tools. I want to turn complex ideas into simple, useful solutions and would like to use my skills to innovate and solve real problems in aerospace.

EDUCATION AND TRAINING

10/2021 – 08/2025 Islamabad, Pakistan

BSS IN AEROSPACE ENGINEERING Institute of Space Technology

Website https://ist.edu.pk/

2017 – 2019 Multan, Pakistan

FSC PRE ENGINEERING KIPS College

Website https://kipscolleges.com/

COURSES & CERTIFICATIONS

Engineering the Space Shuttle – MIT (Coursera)

Studied systems engineering and the CDIO approach through design and operational challenges.

Unmanned Aerial Systems – MIT (Coursera)

Learned UAS introduction fundamentals, components, and applications to careers in drone design and operation.

WORK EXPERIENCE

NAQCODE TECHNOLOGIES – ISLAMABAD, PAKISTAN

INTERN – 06/2024 – 08/2024

Worked on turbine and propeller design using BEMT, performed CFD analysis with ANSYS, XProp, XFoil, and QBlade, and strengthened both technical and soft skills in a fast-paced engineering environment.

PROJECTS

2024 – 2025

Conversion Mechanism Design of a Manned Rotorcraft

As my FYP, I designed rotorcraft that converts into a drone and a bicycle. Focused on CAD modeling, CFD analysis, and structural design with CATIA, SolidWorks, and ANSYS, emphasizing sustainability and urban air mobility.

2024

CFD Analysis of Supersonic and Fighter Aircraft

Performed CFD analysis to analyze shockwaves and airflow on the Concorde, F-16, and a generic bullet/wing.

2024

Aircraft Design

Design and optimization of a Medium Altitude Low Endurance (MALE) Unmanned Combat Aerial Vehicle (UCAV).

2023

Aircraft Performance Analysis

Cessna 172: lift, drag, endurance, range, MTOW, Mach number.

2023

Design And CFD Analysis of an F1 car.

CATIA-based modeling of a Formula-style race car and CFD simulation using Ansys fluent.

2023

Structural Analysis of Landing Gear in Flight

Conducted FEA on aircraft landing gear deployed mid-air, focusing on stress distribution and structural integrity.

2022

Twin Rotor Aerodynamic System (TRAS)

Rotor balancing, overshoot minimization & damping analysis

SKILLS

CAD & Modeling

Catia | OpenVSP | Solidworks

Simulation & Analysis

Ansys | XFLR5 | QBlade | Star-ccm+ | XFoil | QProp

Coding

Matlab | Simulink | Python | CNC Coding

EXTRACURRICULAR ACTIVITIES

2025

Treasurer – IST Character Building Society

2022 – 2024

Geoguessr Competition Winner & Runner-up – IST Geospatial Society

2023

Director Procurement – AIAA IST Chapter

2021 – 2023

Director Planning – IST Space Society

2022

Team Athletics Lead – IST Sports Society

RECOMMENDATIONS

Dr. Muhammad Wasim Assistant Professor – Aerospace Engineering Department

Supervisor in Control Systems, Flight Dynamics & Control (FDC), GNAV, and FDS.

Email muhammad.007wasim@gmail.com

Dr. Muhammad Umer Sohail Assistant Professor – Aerospace Engineering Department

Supervisor in Aerodynamics, Fluid Mechanics, Compressible/Incompressible Flow, and CFD.

Email umer.sohail@ist.edu.pk