Aqib Habib

Islamabad, Pakistan

aqibhabib1@live.com +923322768755 Portfolio

EDUCATION

National University of Sciences and Technology, Islamabad, Pakistan — SEPT 2018 - JUNE 2022
Bachelor of Mechanical Engineering with Minor in Computer Science
Major CGPA: 3.79/4.0, Minor CGPA: 3.88/4.0

WORK EXPERIENCE

Turkish Aerospace Industries **(Structural Design Engineer)** — JAN 2023 - CURRENT

- Developed assemblies, mechanisms and parts for scaled 5th gen fighter aircraft demonstrator
- Prototyping of enclosures, parts and mechanisms using FDM 3-D printing

Pakistan Ordnance Factories **(Assistant Manager Mechanical)** — SEPT 2022 - DEC 2022

- Researched, analyzed and manufactured concept VTOL UAVs
- Designed, tested and analyzed mounts, actuators, and mechanisms
- Manufactured using aluminum, CFRP, GFRP and FDM 3D Printing

Dawlance Arçelik **(R&D Intern)** — JULY 2022 - AUGUST 2022

- Designed and modelled domestic cooling loads and AC systems in MATLAB/Simscape, which projected savings of 1 million per month.
- Tested and analyzed split AC products in the HVAC Lab

Hybrid VTOL UAV System **(Undergraduate Thesis) [Link]** — JUNE 2021 - MAY 2022

- Designed, analyzed, and manufactured CFRP VTOL UAV
- Implemented control systems using Pixhawk 5x
- Achieved Rector's Gold Medal for best undergraduate project

Qadri Group of Companies **(R&D Intern)** — JULY 2021 - SEPT 2021

- Researched and investigated assembly lines for high-speed gears and gear boxes manufacturing
- Proposed new assembly line and machines for gear manufacturing

CO-CURRICULAR ACTIVTIES

IMechE UAS Challenge Pakistan **(Technical Lead)** — MARCH 2021 - JULY 2023

- Constructed technical and design criteria and rulebook for the participants
- Supervised and judged flights and designs of participants

SAE Baja Student Competition **(Team Captain)** — JULY 2019 - JUNE 2022

- Designed, analyzed and manufactured off-road Baja Buggy
- Achieved 4th Position in business presentations all over the world
- Created the first team from Pakistan to compete in the competition

IMechE Chapter NUST **(Technical Executive)** — JULY 2019 - OCTOBER 2020

- Designed competition arenas for design challenges
- Programmed Arduino for the competition arenas

SKILLS

Programming
- MATLAB/Simulink/Simscape for Mathematical Models
- Python and Objected-Oriented Programming

Mechanical Skills
- FDM 3D Printing and Laser Cutting for Rapid Prototyping of parts
- Carbon Fibre Wetlayup for Composite Parts
- CNC Manufacturing of Steel/Aluminum parts

Analysis
- ANSYS Mechanical for FEA Analysis
- Topology Optimization in ANSYS

Computer-Aided Design
- SolidWorks, and CATIA V5, used on various projects involving GD&T, Sheet Metal Design and Surface Modelling
- AutoCAD and SolidWorks were used to draft 2D engineering drawings as per ASME Y14.5 2007

CERTIFICATIONS

Modern Robotics: Mechanics, Planning, and Control Specialization
Aerial Robotics Specialization
Control Design, MATLAB and Simulink
Python Specialization
Industrial Automation with Hydraulics and Pneumatics
Introduction to Finite Element Analysis

HONORS AND AWARDS

75th Celebration of Independence Day of Pakistan Scholarship Program
- Achieved acceptance from Imperial College London and University of Toronto

Rector's Gold Medal
- Awarded for best Undergraduate Project

University High Achiever's Gold Medal
- Awarded for Positions in Student Competitions

3rd Position at ASME Speed CAD Challenge
3rd position at ASME Team CAD Competition