Aqib Habib

Islamabad, Pakistan

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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

COURSES/MOOCS

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

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