

Malik Saif Ullah

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OBJECTIVE

A curious and persevering mechanical and programming graduate, passionate about mechanical automation and emerging technologies. Possessing a hands-on foundation in Computer Aided Engineering & Design, Engineering Simulations, Programming, Machine Learning and MATLAB alongside an accomplished academic background, I am seeking an inclusive learning opportunity to enhance and apply these skills. My goal is to contribute to your organization and its culture by providing innovative and sustainable solutions from Industry 4.0.

EDUCATION

BE Mechanical Engineering | Minor in Computing and Machine Learning [November 2020 – June 2024]

National University of Sciences and Technology (NUST) | Islamabad, Pakistan

- 3.31 CGPA in major degree, with an A grade in minor Machine learning.
- Rector's Gold Medal nomination for the Best UG Capstone Project.
- 15+ cumulative Courses, Workshops, Conferences, Trainings and Competitions attended.
- A total of 3 awards, an academic impact of 500+ people, and a community impact of 10000+ people.

EXPERIENCE

Product Design Engineer [December 2024 – Present]

Octane 8 Technologies | Islamabad, Pakistan

- I am currently working in a leading design firm with clientele all over the country, Europe & Middle East.
- I do R&D, prototyping, and manufacturing of any kind of mechanical, electrical and electronics products.
- Gaining expertise in Design (for concept, prototyping and manufacturing), Rendering, and Optimization.

R&D Trainee Engineer [October 2023 – November 2024]

NUST Advanced Manufacturing Lab (AML) | Islamabad, Pakistan

- I aided in **establishing a manufacturing and testing unit** for composite material using ASTM standards.
- **Improved performance** of composites by **16%** and **reduced kinking by 3%** with **25% cost savings**.
- Acquired expertise in **SolidWorks, Ansys, Abaqus, UTM, CNC, 3D scanning and 3D printing**.

Internship Trainee [August 2023]

Pakistan Aeronautical Complex (PAC) | Attock, Pakistan

In this project-based internship, I worked in an **aircraft parts design for manufacturing** facility for fighter jets like Mirage, JF 17 Thunder, F 16, & C-130 and engine overhaul like ATAR-09C, F-100, and T-56.

Technical Intern [July 2022 – September 2022]

Systems Lab, National Center of Robotics and Automation | Rawalpindi, Pakistan

In this IoT internship, we collaborated with FFC on **Automation of valves and gates for flood irrigation** project and **enhanced irrigation efficiency by 40%** gaining expertise in MATLAB, Ansys, ML & Microcontrollers.

SKILLS

Technical Skills

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| • CAD (SolidWorks AutoCAD Creo Fusion 360) | • CAE Simulations (Ansys Abaqus Nastran) | • Machine Learning (TensorFlow Sci-kit Pandas) |
| • HVAC (HAP) and MEP (Revit) | • MATLAB and Simulink | • Programming (Python C++) |
| • Microcontrollers (Arduino) | • R&D of engineering Materials | • Automation (LabView PLC) |
| • Mathematical modelling | • Basic level Blender rendering | • Basic Quantum programming |

Soft Skills

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| • Microsoft office (MS Word MS Excel MS PowerPoint) | • Project Management (MS Project) | • Basic Data Analysis and Visualization (SQL Power BI) |
| • Presentations Public speaking | • Lean Six Sigma | • Marketing & social media |

PROJECTS

- Thesis; *Crush performance improvement & kinking minimization of novel hybrid fiber reinforced composites*.
- *CFD and Aeroelastic behavior analysis and control of a flexible composite aircraft wing* using MATLAB.
- *FEA stress analysis of a roll cage Baja SAE vehicle chassis* (In collaboration with NUST Automotive Group).
- *Thermo-Fluid analysis of a single cylinder IC Engine* – using Ansys.
- 30+ Computer Aided Design (CAD) and rendering projects: see these in [CAD portfolio folder](#).
- *Cooling and heating load calculation of a flat* – an HVAC project using HAP software.
- *Budget-friendly Ducting system design for a flat* – a comprehensive MEP project using Duct Sizer and Revit.
- *Design and analysis of an Air-Cooled Heat Exchanger (ACHE)* – a CAD and HVAC project.
- *Voice-controlled car using Bluetooth and Arduino microcontroller* - a control engineering project.
- Machine learning models for “*Elderly people fall prediction*” and “*Baby cry classification*”.
- *UAV design project* and *RC models of F-22 Raptor*, and a trainer aircraft (See [Aero club folder](#) in portfolio).
- *Automated supermarket billing system* using C++ programming language.
- See more projects and research in the portfolio by [clicking here](#).

NATIONAL/INTERNATIONAL RECOGNITION

- ♠ Presentation approved for ASME conference at Boston, MA for structural health monitoring of concrete.
- ♠ President National SolidWorks User Group (ISWUG) Islamabad, parented by SW and Dassault systems.
- ♠ Millenium Fellowship and GAC member at Millenium Campus Net. (MCN is a project of United Nations).
- ♠ Vice-President of EME Aeromodelling Club (EAC) – a national level aeromodelling club.

AWARDS AND HONORS

- ✂ 3 Merit certificates for Distinguished Student by NUST – 2023 and 2024.
- ✂ Nomination for Rector’s gold medal for best UG Capstone project by NUST – 2024.
- ✂ Nationwide second runner-up award by FGEI Pakistan for Best Science Project in Physics category – 2020.
- ✂ Regional level winner award by FGEI Wah Cantt for Best Science Project in Physics category – 2019.

SOCIAL/VOLUNTEER WORK

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| † Executive ASME | † Member IMechE | † President ISWUG | † Millenium Fellow |
| † Vice-President Eme Aeromodelling Club | † Team lead NUST Automotive group | † Captain basketball team | † Member Eme Environment Club |

HOBBIES AND INTERESTS

Cartography		Architecture		History and travel		Basketball
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