

MUHAMMAD Bilal Javed

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EDUCATION	
• National University of Sciences & Technology <i>Bachelor of Science - Mechatronics Engineering</i>	Islamabad, Pakistan <i>Sep 2023 – Present</i>
• F.G Sir Syed College,The Mall Road <i>FSC - Pre Engineering/85.45%</i>	Rawalpindi, Pakistan <i>2021– 2022</i>
• Army Public School FWO,Gracy lines <i>Matric - Computer Science/95.90%</i>	Rawalpindi, Pakistan <i>2019 – 2020</i>

SKILLS SUMMARY	
• Computer Languages:	C, C++,Python,Assembly language,Verilog (Hardware Description Language)
• Tools & Software :	AutoCAD, Visual Studio ,Dev-C++ ,SolidWorks ,MS Office , Ansys, Multisim ,MATLAB ,Gradio EasyEDA , Proteus , Keil ,ModelSim-FPGA,NI LabVIEW,Microchip Studio,Microsoft Project
• Platforms:	Windows, Arduino, ESP-32,Raspberry Pi,STM32,NI myRIO,w3schools,Hugging Face,Groq
• Soft Skills:	Event Management, Teamwork, Time Management,Adaptability,Integrity

INTERNSHIP	
• Robotic & Automation - CodeAlpha <i>Internee (Online)</i>	Remote <i>Dec 2025 - Jan 2026</i>
◦ Overview: Strengthened expertise in robotics and automation through applied research and hands-on project work, engineering a PLC-Based Automation System to streamline industrial manufacturing processes and reduce manual intervention, while also designing a Healthcare Robotic System to assist medical staff with patient monitoring and medication delivery, improving operational efficiency in clinical environments.	

PROJECTS	
◦ Autonomous Line-Following & Box-Handling Robot (<i>Mechanical + Electrical + Coding Project</i>): A robot for a specified arena-based warehouse automation theme. The robot performs line following , detects blue boxes , and executes precise domino placement .The system integrates Arduino Mega control, motor drivers, relay modules, and multiple sensors to complete tasks including ramp climbing, junction detection, and parking.	
◦ Multi-Mode Embedded System using 8051 Microcontroller (<i>Mechanical+Assembly coding +software project</i>): An 8051 (AT89C51)-based embedded system with distinct operational modes. Implemented arithmetic computations , LED pattern generation with rotation logic, and parity checking programming in Keil µVision. The system integrates timers, delay subroutines, push buttons , and real-time visual feedback through LEDs, with simulations validated in Proteus.	
◦ Smart Fire & Smoke Detection System with Automatic Alarm (<i>Electrical Hardware + Coding Project</i>): An ESP32-based embedded system using MQ-2 gas/smoke sensor and flame sensor to detect fire hazards. The system automatically triggers a buzzer alarm,and provides visual LED indicators .	
◦ Metal Pen Design & Manufacturing (<i>Mechanical Hardware+software Project</i>): A premium metal pen(aluminum and brass)using CNC turning, drilling, threading, and knurling on lathe machines and on SolidWorks.	

CERTIFICATIONS	
• Completion of Gen-AI Training from PAKANGELS-Feb,2026	
• Completion of PowerPoint presentation design workshop - Feb,2025	
• Participation in Robot building workshop - Dec,2023	
• Completion of MS Office training program from Learning With Earning - March,2023	
• Participation in course 'An Introduction to Human Rights' from Amnesty International - Feb, 2023	
• Overall securing 43rd position in FBISE SSC examination and 2nd in institute - July,2020	
• Certificate of Sequential/Critical Thinking - 2018	

VOLUNTEER EXPERIENCE	
• P@SHA Facilitated networking between industry professionals and participants at NASTP, ensuring effective communication and engagement throughout the tech summit.	Rawalpindi, Pakistan <i>Sep, 2025</i>
• Datafest Supporting the Pakistan Bureau of Statistics at Pak-China Friendship Center in organizing data-driven workshops and exhibitions to promote statistical literacy and digital innovation.	Islamabad, Pakistan <i>Nov, 2025</i>