

CONTACT	Phone: +92-339-0382387		Email: muhammadfaizantahir31@gmail.com
ABOUT ME	Creative Mechatronics Engineering student at Air University Islamabad with a strong foundation in robotics, IoT, and embedded systems. Experienced in 3D modeling and PCB design using tools like SolidWorks, Proteus, and EasyEDA. Proficient in Arduino, Python, and C++ programming, with hands-on expertise in hardware integration and prototyping. A dedicated team player and effective leader, passionate about developing practical, tech-driven solutions. Founder of Rebottle, a startup committed to innovative plastic bottle recycling.		
PROJECTS EXPERIENCE	<div>ENGINEERING PROJECTS:</div> <ul style="list-style-type: none">Line Following Robot: Designed an intelligent robot with dual microcontrollers (Arduino Nano & ESP32), IR sensor array, ultrasonic sensor, OLED display, SD card logging, and a custom single-layer PCB.Sumo Robot: Built a torque-optimized sumo robot using power window motors and a custom H-bridge driver circuit for high-load pushing capabilities.Bluetooth-Controlled RC Car Developed a 4-Wheel RC car using dual L298 motor drivers and Arduino Nano with Bluetooth-based mobile control.Custom Arduino-Compatible Board Fabricated a modular, single-layer PCB for Arduino Uno with accessible pinouts to streamline prototyping in embedded systems projects.Humanoid Robot Designed and built a functional humanoid robot capable of basic movement and interaction, showcasing skills in mechanics, electronics, and system integration.Rebottle – Reverse Vending Machine (Ongoing): Developing a smart recycling machine for plastic bottles with color sorting, crushing, actuator control, and sensor feedback integration. <div>PROGRAMMING PROJECTS:</div> <ul style="list-style-type: none">Voice Assistant: Developed a Python-based assistant with speech recognition, task automation, and smart device control.BMI Calculator (GUI) Built a GUI tool in Python with data tracking, categorization, and trend visualization.Random Password Generator: Created a secure, customizable password generator with GUI and clipboard integration.Weather App (GUI): Designed a GUI-based weather app with API integration and visual forecast display.Chat Application: Built a GUI-based real-time chat app with authentication, media sharing, and encryption.		
EDUCATION	<div>Air University Islamabad – Bs Mechatronic Engineering</div> <div>2023–Present GPA: 2.56</div> <div>FG Sir Syed College, The Mall , Rawalpindi – HSSC (PRE-Engineering)</div> <div>2021–2023 Grade: A</div>		
SKILLS	<div><div><ul style="list-style-type: none">Robotics & IoTEmbedded Systems3D Modeling (SolidWorks)</div><div><ul style="list-style-type: none">PCB Design (Proteus, EasyEDA)Hardware PrototypingMicrocontroller Programming</div><div><ul style="list-style-type: none">Python/C++LeadershipEntrepreneurship</div></div>		
CERTIFICATES	<div>Python for Everybody Specialization – Coursera (University of Michigan)</div> <div>In Progress – (4 of 5 courses completed)</div> <div><ul style="list-style-type: none">Covered: Python basics, data structures, web scraping, databases</div> <div>Fundamentals of 3D Printing – 128 Technologies</div> <div>Completed</div> <div><ul style="list-style-type: none">Certified in 3D printing fundamentals, covering design and additive manufacturing basics.</div>		