

Ahmad Maaz

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EDUCATION

University of Engineering and Technology (UET)
B.Sc., Mechatronics and Control Engineering, CGPA: 3.05/4.0

Lahore, Punjab
October 2017-June 2021

Punjab College
HSSC, Physics, Chemistry, Mathematics, *Percentage*: 88.9%

Sargodha, Punjab
September 2015-August 2017

Dar-e-Arqam Model High School
SSC, Science group, *Percentage*: 92.3%

Sargodha, Punjab
March 2013- June 2015

EXPERIENCE

XISYS Consulting Company
Associate Design and Robotics Engineer

Lahore, Pakistan
January 2022 – Till now

- Research and development on UAVs using the flight stacks like ***Ardupilot, PX4, INAV and Betaflight***.
- Design of Drone hardware including mechanical and electronic parts such as circuit designing and debugging.
- Simulating the Swarm of drones and then implementing in real world to carry out different operations.

Interns.pk
Engineering Intern

Lahore, Pakistan
May 2021 - June 2021

- Learning of different programming languages.
- Assignments on different problem solving techniques using C++,C and Java languages.

NOOR (PVT) LIMITED
Engineering Intern

Lahore, Pakistan
June 2020 - September 2020

- Part time job in assisting service engineering in servicing of laboratory equipment.
- Customer assistance.

PROJECTS

Job based Projects

Surveillance Drones

- Design of different UAVs (Fixed wings and Multi-rotors) demanded by different companies for surveillance purposes such as monitoring the faults in high voltage power lines.
- Detection and recognition using the UAVs helpful in the Pandemic environment.

Swarm of Drones

- Using ROS, simulation in Gazebo and implementation of swarm of drones making them follow defined patterns and do defined tasks.

Battery Tester

- For checking the capacity rating of each lithium polymer battery, I designed a battery tester based on Atmel, external ADC and DAC to apply a constant current draw on the battery thus measuring its endurance.

Final Year Project

7th – 8th Semester

Design of an Embedded flight controller for a Quadcopter.

- Designing a low cost flight controller for Quad-copter based on PID controller.
- An optimized and stabilized FC in form of hardware and software implementation using STM32 F1 board.
- Using the attitude, altitude and GPS control, making the Quad-copter 3D fixed in air.

Semester Projects

Distance Measuring Wheel

5th Semester

- A hand-held distance measuring device that can display measured distance value on the LCD screen.

2-D CNC ink plotter device

4th Semester

- Cartesian based 2-D CNC plotter useful for plotting different patterns on paper or PCB layouts.

Wall Following robot

4th Semester

- 3 wheel robot that can follow left wall using Arduino microcontroller and a SONAR sensor.

Smart home appliance switch

2nd Semester

- Home appliance switch that can be operated using any IR remote, based on IR sensor.

Hobby Projects

ROS Rover

- A 4 wheeled robot based on ROS that can navigate to different positions using QR code information.

Smart Door lock system

- Smart Door lock system operated by mobile phone based on IOT board esp8266.

Automated Geyser

- Automated the Instant Geyser using esp32 board and a temperature sensor whose range can be set by mobile app.

ACHIEVEMNETS

Robo-War Competition

December 2019

- Winner of Robo-War competition, organized by science society in Hi-Tech Taxila.

Speed Soldering Competition

January 2020

- Two time consecutive winner of speed soldering competition held by UET Mechatronic Club.

Line Following Robot Competition

March 2020, December 2019

- Winner of Line Following Robot (LFR) competition organized by IET society of COMSATS Lahore.
- Runner up in LFR competition organized by science society in Hi-Tech Taxila.

Sumo Wrestling Robots Competition

October 2020

- Runner up in Sumo Wrestling Robots competition held in University of Lahore.

VOLUNTEER WORK

Mechatronics Club

UET, Lahore

Member of Technical Team

February 2018 – January 2020

- Organized PCB design and fabrication workshop in UET Lahore.

SKILLS

- Programming Language Skills: C++, C, Python and Assembly (intermediate level).
- Hardware Skills: Microcontrollers (Arduino, Espressif boards, STMicroelectronic boards, Pyboard), Analog electronics, Power Electronics.
- Hard Skills: Soldering, PCB Fabrication, Hardware based problem solution, Circuit designing and debugging.
- Software Skills: MATLAB, SolidWorks, Proteus, Pspice, Multisim, Ansys, RsLogix, Arduino IDE, Keil uVision
- Language: English, Urdu, Punjabi