

Zeeshan Tariq

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Career Objectives:

To work as a junior research associate with a reputed clinical research center and learn the intricate methods of conducting research and acquire the expertise of working on research programs independently.

Educational Information

➤ UET PESHAWAR-CGPA 3.3/4.0

- *Degree in Mechatronics Engineering , May 2018*

Professional Experience

MCOM (Skycopters), Islamabad, May 2018-Present

➤ UAV Controller

Major Duties Includes

- Research Work on designing a *Fire Extinguishing Drone* for Commercial use.
- Designing own *Batteries* for Drones by using *LI-ion* cells to increase flight time.
- Repairing the *DJI* drones including *Phantom, Inspire, Spark* and *Mavic* series.
- Assembly, Programming And Calibration of Multirotors by using *A2 Flight Controller System* and *Assistant Software*.
- Flying drone for *Arial Cinematography*.

EWall - SMC Pvt Ltd (Research lab), Peshawar, June 2017-April 2018

➤ Embedded System Engineer

- Designed own *Flight Controller* and Software for *QUADCOPTER* by using 32bit *STM32F103C* Microcontroller
- Worked on *CAN* (protocols) and Encoder for *PWM* to *SBUS* Conversion
- Successfully designed and tested Arduino based *Quadcopter* by using *MPU6050*.
- Detailed research work on *Battery Management System (BMS)* and discharging time, Cost, Life Span and Weight of *Li-ion* and *li-polymer* batteries.
- *Printed circuit boards (PCB)* by using *Proteous* and *Kikad* software.
- Designed own high power *BUC Converter* with very small overshoot for regulating voltage up to 120V.
- *Drone* calibration and *PID* tuning by using *Mission Planner* and *Ardupilot*.

Projects

Final Year Project

- Trajectory planning and control of Robotic manipulator by using image processing.

We have designed a 4DOF robotic arm which can perform pick and place operations. Camera is placed at the top of the robot which captures the image of object in robot's workspace. The captured image is then processed and coordinates of object are calculated, these coordinates are then sent to robotic arm which perform the operation of picking and placing.

Semester Projects

- **Autonomous Mobile Robot** using Ultrasonic sensors, IR sensors and Arduino
- Muscles Motion Detection by using Force sensing Resistor (**FSR**)
- **Water Level Indicator** by using (LCD) .
- Obstacle avoidance **Line Following Robot** .

Professional Certificates

- Certified for English proficiency.
IELTS 6.0 BANDS (British Council)
- Microsoft Word Certified User.
Result: (940/1000) Marks.

Software Skills And Programming Expertise

- **SolidWorks** and **AutoCAD**.
- **Arduino IDE**
- **Proteous** and **Kikad**
- **MATLAB** (Image processing and vision).
- **Code Blocks** and **Keil** (c++,oop).
- **Mission Planner** and **Ground Station (GS)**.

Major Courses

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|-------------------------|------------------------------|-------------------------------|
| ◆ Power Electronics | ◆ Digital Logic Design (DLD) | ◆ Control System |
| ◆ Computer Aided Design | ◆ Digital Signal Processing | ◆ Electric Circuit Design |
| ◆ Industrial Automation | ◆ Robotics | ◆ Materials and Manufacturing |
| ◆ Microcontrollers | ◆ Electromechanical Systems | ◆ Instrumentation |