**MUHAMMAD UMAIR RAFIQ**

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**QUALIFICATIONS**



**HITEC UNIVERSITY TAXILA Taxila Cantt.**

BSc. Electrical Engineering (Power) Sep,2012 – July,2016



**SUPERIOR COLLEGE Faisalabad.**

FSc. Pre-Engineering Sep,2010 – Aug,2012



**GOVT TECHNICAL HIGH SCHOOL Faisalabad.**

Matric (Science) Sep,2008 – June,2010

**ADDITIONAL COURSES**

* **PROGRAMMABLE LOGIC CONTROLLER (PLC)**

Ladder Programming

ISRA University

**FINAL YEAR PROJECT**

**OPTIMUM ENERGY MANAGEMENT SYSTEM**

* To control and maintain the electrical energy of the building on the microcontroller based system. System having automatic control through infra-red sensors, manual control through touch screen display module and android application.

**EXPERIENCE**

**INTERGRATION OF SMS-SERVICES FOR COMMUNICATION IN SYSTEM**

HMI May,2018 – July,2018

* Integration of SMS service through a GSM module and program it for communication of data through messaging service. System communicates of data variables, starting and stopping time stamps, user ID that operate the system, error and warnings that generated during operation.

**GAS RIG APPLICATION FOR DATA MONITORING AND VISUALIZATION**

HMI April,2018 – May,2018

* Developing the script that automatically capture picture of user and the input data uploaded to the google cloud big Query using google Pub Sub Topics, google cloud function and google storage bucket. With all the necessary data in the cloud visualizing the data with Google Data Studio.
* The whole system is running on raspberry pi 3 model B+ with linux flavor debian based OS raspbian jessi, internet connectivity must be maintained at all levels in case of disconnection system automatically start generating a queue for the data to be uploaded when the system reconnects to the cloud services.



**DEVELOPMENT OF APPLICATION FOR LOCAL AND CLOUD DATABASE**

HMI Oct,2017 – Nov,2017

* Building windows application in C# that monitor dispenser for status and import data via RS-485 protocol for local and cloud storage. Local and cloud database is managed through google cloud storage services using xml buckets.

**DESGNING OF CNG DISPENSER GUI INTERFACE AND BACK END SYSTEM**

HMI July,2017 – Oct,2017

* Replacing old system with new raspberry pi 3 boards. Programming in Python and C++. Interfacing micro motion flow meter with raspberry pi via RS-485 to TTL serial convertor. Designing GUI in tkinter and used multithreading to keep the system speed efficient. Installing Elo-touch display boards with arm v7 display and input drivers.



**DEVELOPMENT OF SUNRISE/SUNFALL PATTERN FOLLOWING LAMP**

Autopilot Limited – THIBAULT JUDICQ, HONGKONGFeb,2016 – Apr,2016

* Lamp that mimic sunrise/sun fall pattern using RTC and can also be controlled by Android application for setting alarm. Alarm can be indicated on LCD and with a buzzer.

**HEAVY INDUSTRIES TAXILA**

Internee Electrical Power Engineer July,2015 – Aug,2015

* Work in a team to build a temperature controlled microcontroller based Fan system for the onboard PCBs of the military vehicle.

**SKILLS**



* C/C++, C#, Python, Google cloud services,

HTML, Ladder Language,

MATLAB, Simulink, Proteus,

Visual Studio,

MS Office Suite