Umar Akhtar

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PROFILE

I am a fresh graduate in the field of BEng Electrical and Electronics engineering from Namal College, Pakistan (An associate college of University of Bradford, UK) and currently working as a R&D intern in Shamsi Tawanai (Pvt) Ltd, Mianwali on the designing and implementation of three phase inverters. During my studies, I have worked on multiple projects related to digital electronics, power electronics and robotics. I did my final year project on multilevel inverter for grid tied applications using Arduino microcontroller. I have been a part of different university societies from the last three years and have keen interest to work in a multi-dimensional firm in electrical and electronics sector.

EDUCATION

	Grade	Year
Namal College, Mianwali (University of Bradford, UK)		**2018**
BEng in Electrical and Electronics Engineering	First Class Honors	
Board of Intermediate & Secondary Education Faisalabad		**2014**
F.Sc (Pre-Engineering)	77%	
Board of Intermediate & Secondary Education Faisalabad		**2012**
Secondary School Certificate	86%	

WORK EXPERIENCE

Shamsi Tawanai **May, 2018 – Present**

- **R&D Intern:** Working on the designing and implementation of three phase grid tied inverter for motor drives.

WAPDA Engineering Academy Faisalabad **May, 2017 - June, 2017**

- **Internee Engineer:** Attended workshops on power generation, transmission and distribution.

Steam Power Station Faisalabad **July, 2016 - August, 2016**

- **Internee Engineer:** Observed open cycle and closed cycle power generation in thermal power station and steam turbines.

Namal club for arts and media **2017-2018**

- Worked as a director music and singing.
- Planned different musical events.
- Gathered sponsorships.
- Prepared pre and post event reports.

IEEE Namal students branch **2016-2017**

- Managed multiple events as general secretary.
- Delegation of authority

ACADEMIC PROJECTS & RESEARCH

Multilevel inverter for grid tied applications **Final Year Project**

The aim of the project was to design a multilevel inverter using best switching angles for switching devices to obtain less than 5% total harmonic distortion (THD) that is favorable for grid tied applications as per IEEE rules and regulations. It is a seventeen level inverter implemented using Arduino microcontroller and diode clamped topology.

Dual Core processor **Digital System Design**

A processing unit that has been made by combining two cores on a single chip that is capable of performing parallel processing and fast computations. This is implemented using FPGA board under Xilinx working environment.

Digital Clock **Digital System Design**

A digital Product having functionalities of displaying real time and date along with alarm setting, stopwatch and user friendly interface. It has been implemented using Arduino microcontroller and programmable modules.

Maze Solver Robot **C programming with robotics**

It is a puzzle solver robot with an Artificial Intelligence implemented using recursion and is capable of moving to its destination in a 4x4 matrix through shortest available path. Additionally, it can detect any hurdle in its path using distance sensor and can take another available route to reach destination.

Fitness Monitoring System **System Design Group Project**

This digital gadget facilitates the user in keeping track of his fitness activities. The user can check the duration of exercises, calories burnt, distance covered and can see his heartbeat anytime. The whole data is saved in a SD card and is displayed on the screen. It has been implemented using Arduino microcontroller, accelerometer module, pulse sensor and LCD.

Implementation of small projects **2014-2018**

I have also implemented different small projects such as Tic-tac-toe, Life Game, Chess game, Calculator and many more in C language and C++.

English Proficiency

- **IELTS (Academic):** 6.5 bands

AWARDS AND HONORS

- Got best project award in System Design Group Project **2017**
- Got best singer of NAMAL award **2015**
- Awarded Full Scholarship for Intermediate studies in Divisional Model College, Faisalabad **2012-2014**
- Got 2nd position in a National Debating Competition **2014**

TECHNICAL SKILLS

Programming Languages: Proficient in C, C++, Arduino programming language, Xilinx programming language, Matlab language.
Tools: Arduino IDE, Xilinx, Matlab, Proteus, KiCad, Minitab
Operating Environments: Window 7, Window 8.1
Others: Proficient in Microsoft Word, MS Project, MS Excel.

HOBBIES AND INTERESTS

Social Work, Photography, Singing, Table tennis, Hiking, Sightseeing and using Internet.

References

- **Dr. Amir Khurrum** (Associate professor, Namal college, Mianwali)
  Email: amir.khurrum@namal.edu.pk

- **Mr. Fayyaz Kashif** (Senior lecturer, Namal College, Mianwali)
  Email: fayyaz.kashif@namal.edu.pk

- **Ms. Abbirah Ahmed** (Senior lecturer, Namal College, Mianwali)
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