Muhammad **Usama Anjum**

ELECTRICAL ENGINEER · SPECIALIZATION IN COMPUTER SCIENCE

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Education

University of Engineering and Technology, Lahore

M.SC IN ELECTRICAL ENGINEERING   *2018 - Present*

University of Engineering and Technology, Lahore

B.SC IN ELECTRICAL ENGINEERING   *2014 - 2018*

Punjab College for Boys, Sheikhupura

F.SC PRE-ENGINEERING   *2012 - 2014*

Experience

Mentor - A Siemens Business, Lahore

SOFTWARE DEVELOPMENT ENGINEER   *June 2017 - Present*

- Worked on Nucleus RTOS Kernel

University of Engineering and Technology, Lahore

TEACHING ASSISTANT   *Jan. 2016 - May 2017*

- Designed study material, facilitated workshops, conducted lab sessions, marked assignments and quizzes (Microprocessor Systems, Digital Logic Design, Programming Fundamentals and Introduction to Programming)

Projects

IP Core Design of Encoder & Soft-Output Decoder for Polar Codes (Verilog, C)   *Group*

FINAL YEAR PROJECT   *Aug 2017 - May 2018*

- Designed low hardware complexity and high throughput cores of 32,768-bit Encoder with the throughput of 20 MB/s and 32-bit Decoder with the throughput of 4 MB/s
- Simulated cores on ModelSim, implemented on Xilinx FPGA - Spartan-3 and verified results on 50,000 random test cases

System Level Applications in Ubuntu and Kernel Programming in XV6 (C)   *Individual and Group*

OPERATING SYSTEMS   *Jan 2018 - May 2018*

- Implemented Unix Shell, Malloc Library, Scalable Web Crawler in Ubuntu
- Added system calls, implemented round-robin & MLFQ scheduler, changed the position of stack & heap in the kernel of XV6 OS

GSM based Tic-Tac-Toe Game (C)   *Group*

MICROPROCESSOR SYSTEMS   *Dec 2016*

- Made Tic-Tac-Toe game by interfacing GSM module SIM900A with ARM Cortex M4 micro-controller
- Did programming on register level, debugged in real time and displayed the game on LEDs by time-multiplexing

MIPS 32-bit Processor (Verilog)   *Individual*

COMPUTER ARCHITECTURE AND DIGITAL SYSTEM DESIGN   *Dec 2016 - May 2017*

- Made pipelined, multi-cycle and single-cycle MIPS processors using Verilog and simulated on ModelSim

Technical Skills

Academic Courses	Operating Systems, Database, Algorithms, Microprocessor Systems (Assembly Language), Digital System Design, Computer Architecture, Computer Networks and Machine Learning
Programming Languages	C, Assembly, JAVA and Verilog
IDEs	Visual Studio, Keil, Eclipse and Xilinx ISE

Extra-curricular

Student Bodies	Skpians' Frame (HR Manager), UET XNEWS (Webmaster), Stem5, EE Web Development Team, IET UET Chapter and IEEE UET Lahore
Hobbies	Social welfare, gaming, watching movies and seasons

Honors & Awards

May 2017	**1st place**, STEM Code Camp as Mega Project, Amal Academy Fellowship	*Lahore*
2014-2015	**Dean's Honor Roll**, Department of Electrical Engineering	*Lahore*
2014	**5th Place**, F.Sc, In District Sheikhupura, Bise Lahore Examinations	*Sheikhupura*