

Muhammad Toqueer Ali

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EDUCATION AND TRAINING

Doctor of Science in Computer Science

University of Verona [01/12/2022 - Present]

Supervisor: Graziano Pravadelli

Masters of Science in Computer Engineering

HITEC University [04/09/2018 - 06/07/2020]

Final grade: 3.80/4.00

Thesis: Run-Time Extraction of Memory Efficiency Metrics for Application Optimization

Short Description: In this research, we enhanced the features of MCPROF (Memory and Communication Profiler) by introducing additional important metrics. These metrics provide information about Memory Allocation Efficiency (MAE) and Memory Utilization Efficiency (MUE). We show the utilization of these metrics for the optimization of realistic applications to show the efficiency of the proposed metrics.

Supervisor: Dr. Imran Ashraf

Reward: Distinction

Bachelor of Science in Computer Engineering

HITEC University [07/09/2014 - 08/08/2018]

Thesis: Iris Recognition University Web Based Attendance System

Short Description: The work includes two parts, hardware, and software. The hardware part is responsible to capture images and run the required program whereas the software part is responsible for accusation, processing, iris localizing, adjusting, matching, and storing data; sending the attendance report to the predefined website address. Finally, the system detects, calculates, stores, and transmits the results to the website.

Supervisor: Dr. Hashim Ali

WORK EXPERIENCE

Junior Lecturer

SZABIST University [17/09/2020 - Current]

City: Islamabad

Country: Pakistan

Major responsibilities include:

- Assisting with various departmental duties and providing academic support to the head of the department

(HOD).

- Teaching and supervising undergraduate students as project supervisor.
- The recently taught courses include Object-oriented Programming Techniques (OOPT), Programming Fundamentals, Digital Logic Design, Operating Systems, and, Computer Networks.

Lab Engineer

SZABIST University [14/09/2019 - 11/07/2020]

City: Islamabad

Country: Pakistan

- One year of working experience as a lab engineer.
- Conduct three courses lab, Computer organization & assembly language (COAL), Database Management Systems (DBMS), and Engineering Physics.

Higher education research assistant

HITEC University [16/09/2018 - 09/01/2020]

City: Taxila

Country: Pakistan

- One and a half years of working experience as a Teaching and Research Assistant.
- Delivered tutorials of different courses (Embedded system, DIP, Digital system design).
- Work on different research papers under the supervision of different Assistant Professors.
- Maintained Professor's courses data, folders, and lab records.

Project Partner

Pakistan Missile Research and Development Program [13/09/2018 - 25/11/2019]

City: Taxila

Country: Pakistan

- The project is about bullet spot detection from thermal video streaming.
- Image processing techniques used on MATLAB.

Web programmer

GOSIGN Software house [08/06/2015 - 28/09/2015]

City: Sargodha

Country: Pakistan

- On-hand working experience with HTML for website designing.
- Learn and implement PHP language for website development.
- Also, deal with database management systems for website development.
- Develop a simple website using my own website design on the local server domain.

LANGUAGE SKILLS

Mother tongue(s): **Urdu**

Other language(s):

English

LISTENING B2 READING C1 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

DIGITAL SKILLS

Microsoft Word / Microsoft Powerpoint / Google Drive / Database - MySQL / Programming: C, Java, Apex, Python, OCaml, OpenGL / C C++ C / Verilog programming language / HTML CSS PHP / latex / Programming Languages: C, C++, Python, Matlab

PUBLICATIONS

List of publication(s)

- Rana, Kaynat, Asim Niaz, Sumbol Hanif, and **Muhammad Touqeer Ali**. "4x4 Bit Multiplier Designs using Different CMOS Schematics, and their Comparison." *Technical Journal* 24, no. 04 (2019): 15-22.

HONOURS AND AWARDS

Here is the list

1. Gold Medalist for maintaining highest CGPA in Master Program.
2. Gold Medalist for completing Research work of Master's Program within 6 months.
3. Certificate for conducting one-day CPD short course workshop "LATEX for Engineers".

TECHNICAL SKILLS

List of skills

The majority of the skills are learned at university. These skills are as follows:

- Web Designing (HTML, PHP WordPress).
- Hands-on experience in the Image processing field.
- Languages (C, C++, Python, Cuda, Assembly Language, Verilog, MATLAB)
- Controllers (Raspberry pi, Arduino, GPU).
- I have a good command of latex and office suits (Microsoft Word, Spread Sheet, and Presentation Software).

PROJECTS

List of Projects

Project # 1

Title: Iris Recognition Student Attendance system

Description: The project includes two parts, hardware, and software. The hardware part is responsible to capture images and run the required program whereas the software part is responsible for accusation, processing, iris localizing, adjusting, matching, and storing data; sending the attendance report to the predefined website address. Finally, the system detects, calculates, stores, and transmits the results to the website.

Project # 2

Title: Bullet Hit-Point Detection from Video Streaming Using Machine Learning

Description: This project is based on the real-time detection of a bullet hitting a Thermal board or any material which may produce impact whether it is an air gun bullet or the conventional bullet through video streaming. The system provides the appropriate accuracy of the bullet hit on the thermal target board. This system provides help to maintain the data of the required frames to the database. The system also have provide the front-end to this project which helps the user to have better use of the system.

Project # 3

Title: Arduino Based Health Monitoring System

Description: The project collects and sends patients' health data to a web server where the real-time health status of the patient can be recorded and monitored in a remote location where a healthcare professional is present. This device reads the pulse rate and measures the surrounding temperature. It continuously monitors the pulse rate and surrounding temperature and updates them to the web.

Project # 4

Title: Online Web-Based Student Clearance System

Description:

An online web-based student clearance system is designed for the final year students who are supposed to apply manually for their clearance after the completion of the graduation. For this project a HTML, PHP, based website is design which link the university student to the department and they have too fulfil all the requirements online according to the details mentioned on the web.

Project # 5

Title: Arduino Based Obstacle Avoidance Robot

Description: In this project, an Obstacle Avoiding Robot is designed. It is an Arduino based robot that uses Ultrasonic range finder sensors to avoid collisions.

RECOMMENDATIONS

1. Name: Dr. Imran Ashraf

Position: Professor

Organization: HITEC University, Taxila (Pakistan)

Email: Imran.ashraf@hitecuni.edu.pk

2. Name: Dr. Junaid Tariq

Position: Assistant Professor

Organization: HITEC University, Taxila (Pakistan)

Email: juniad.tariq@hitecuni.edu.pk