

## EDUCATION

### Master of Science, Software Engineering

University of Engineering and Technology (UET), Taxila, Pakistan

Oct 2018 – Dec 2022

CGPA 3.33/4.00

- Supervisor: [Prof. Ali Javed](#)
- Thesis: "Deep Learning Model for the detection and classification of Diabetic Retinopathy"
- Major courses: Algorithm Design & Analysis, Advanced Software Technologies, Deep Learning

### Bachelor of Science, Software Engineering

Department of Software Engineering, University of Engineering & Technology (UET), Taxila, Pakistan

Oct 2014 – July 2018

CGPA 3.50/4.00

- Supervisor: [Prof. Syed Muhammad Anwar](#)
- Final Year Project: "Context-Aware Smart Car App for Personal Assistance"
- Major courses: Artificial Intelligence, Web Development, Software Testing, Software Quality

## RESEARCH INTERESTS

- medical image analysis and digital health using deep learning and machine learning
- integration of Large Language Models (LLMs) and Vision-Language Models (VLMs) with computer vision for clinical decision support
- AI-driven healthcare through deep learning, image processing, computer vision techniques

## PUBLICATIONS

Deep Learning Model for the detection and classification of Diabetic Retinopathy ([Paper](#)) (ICTAPP-2023)  
**Samra Nawazish**, Ali Javed, Tahira Nazir

Studying the Invasion of Drones in Indigenous areas using Machine Learning Techniques ([Paper](#)) (UCP Journal- 2024)  
**Samra Nawazish**, Amin Ullah, Jawad Hassan

Performance Evaluation of MANET Routing Protocols Based on Size and Speed Parameters ([Paper](#)) (UCP Journal-2024)  
Amin Ullah **Samra Nawazish**, Jawad Hassan

Image Fusion using Wavelet Transformation and XGboost Algorithm ([Paper](#)) (CMC-2024)  
Faten S. Alamri, Dr Shahid Naseem, Tariq Mahmood, **Samra Nawazish**, Tanzila Saba

Towards sustainable smart cities: Applications, Challenges and Future Directions ([Paper](#)) (IJDSA-2025)  
Amin Ullah, Saddam Hussain, **Samra Nawazish**, Irfan Ullah, Zafar Ali

Enhancing Dental Caries Identification with Deep Learning: A study of Convolutional Networks and Transfer Learning Approaches ([Paper](#)) (ssrn 4945802-2024)  
Fayqa Manan, Muhammad Adeel, **Samra Nawazish**, Amin Ullah, Amjad Rehman

## PROFESSIONAL EXPERIENCE

### Research Associate

April 2025 – to date

[Intelligent Machines Lab](#), Information Technology University (ITU), Lahore, Pakistan

Advisor: [Dr. Waqas Sultani](#)

Research topics: Source-Free Domain Adaptation for Image Segmentation, Large Language Models, Vision Language Models

- Working on real-time Microscopic Images and Video Enhancement and Stitching tool
- Trained [Segformer](#) on Hemato dataset to accurately generate segmentation masks for Blood Cancer dataset Leukemia
- Using [Transformers](#), developed a language translator that translates given text in English to Urdu
- Implemented [DRA-Net](#) for semantic cell segmentation on the BCCD dataset in Whole Slide Images
- Applied [ResNet-50](#) to classify flowers across seven categories

### Teaching Assistant

Aug 2025 – to date

Instructor: [Dr. Mohsen Ali](#) Postgraduate Course Computer Vision CV525, ITU, Lahore, Pakistan

### Graduate Research Assistant

Aug 2021 – Jan 2023

Department of Software Engineering, University of Engg. and Tech., Taxila, Pakistan

Research topic: Deep Neural Networks

- Explored Deep Learning models and transfer learning algorithms for the detection and classification of Diabetic Retinopathy

## Lecturer

July 2021 – Dec 2024

Swedish College of Engineering & Technology, Wah Cantt, Pakistan

- Taught Courses: Programming Fundamentals, Object Oriented Programming, Introduction to Computers, Software Testing, Artificial Intelligence

## Junior Software Developer

June 2019 – June 2021

Heavy Industries Taxila (HIT), Taxila Cantt, Pakistan

- I design, build, and maintain front-end, back-end, and database systems to deliver seamless, user-friendly applications

## SUMMER SCHOOLS / INTERNSHIPS / WORKSHOPS / CONFERENCES

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- Attended RISE-MICCAI Summer School (virtual) from July 14–18, 2025
- Attended RISE-MICCAI Summer School-Local Activity (virtual) from July 14-17, 2025 organized by MBZUAI
- Attended 2024 IEEE / OES China Ocean Acoustic Conference on May 29-31, 2024 in Harbin, China
- Attended China-Pakistan Marine Information Workshop and Training Course organized at Harbin Engineering University, Harbin, China from June 01-14, 2024
- Attended International conference on computing technologies, tools, and applications ICTAPP-23 on May 09-11, 2023, in Peshawar, Pakistan

## HONOURS & AWARDS

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- Fully funded Masters scholarship holder from UET Taxila, Pakistan
- Undergraduate merit-based scholarship holder from Federal Government Employee Quota
- Awarded Prime Minister Laptop Scheme Gift 2016
- Academic board topper excellence award in ICS (FBISE Islamabad) 2014
- Academic board topper excellence award in SSC (FBISE Islamabad) 2012

## ACADEMIC SERVICES

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- Served as a reviewer for MICCAI 2025
- Volunteer reviewer of Information fusion (in the area of medical imaging and IoMT)
- Designed Course Learning Outcomes and Program Learning Outcomes at Swedish College

## IELTS & GRE

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- IELTS: Listening: 6.0 Reading: 6.5 Writing: 6.0 Speaking: 6.5 Overall: 6.5
- Graduate Record Examination (GRE): Quantitative Reasoning 154 Verbal Reasoning 137, Total: 291

## LANGUAGES

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English, Urdu, Punjabi

## OTHER INTERESTS

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- Exploring culture, Gardening, Cooking, Watching Tech videos

## REFERENCES

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- Prof. Dr. Syed Muhammad Anwar, Sheikh Zayed Institute, Children's National Hospital, Washington DC, USA  
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- Dr. Ali Javed, Associate Professor, University of Engineering & Technology, Taxila Pakistan  
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- Dr. Tariq Mahmood, Post-doctorate Research Fellow, AIDA Lab, Prince Sultan University, Saudi Arabia  
Email: [tmahmood@psu.edu.sa](mailto:tmahmood@psu.edu.sa) Contact : +966532042334