

# Qaiser Abbas

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## Education

### M.S Computer Science

Lahore, Pakistan

UNIVERSITY OF ENGINEERING AND TECHNOLOGY LAHORE

3.78/4.0 CGPA – 94.25% - TOP 10%

2018 - 2020

THESIS: ACRAL LENTIGINOUS MELANOMA DETECTION USING DERMOSCOPIC IMAGES AND CONVOLUTIONAL NEURAL NETWORKS

### B.S Information Technology

Sargodha, Pakistan

UNIVERSITY OF SARGODHA

3.63/4.0 CGPA – 90% - GOLD MEDAL (CAMPUS)

2014 - 2018

FINAL YEAR PROJECT: IOT BASED LOW COST INTELLIGENT SURVEILLANCE SYSTEM FOR SMART HOME SECURITY

## Experience

### Department of Computer Science, University of Engineering and Technology

Lahore, Pakistan

TEACHING FELLOW

Mar 2021 - Present

- Teaching undergraduate courses (Theory+lab).
- Assisting the senior faculty in designing course contents and writing proposals for research grants.
- Research the latest Deep Learning and Computer Vision technologies to solve real-world problems.
- Mentoring final-year students in their Final Year Projects (FYPs).

### Bioinformatics Research Lab, Al-Khawarizmi Institute of Computer Sciences

Lahore, Pakistan

MS STUDENT

Jan 2020 - Oct 2020

- Worked with Dr. Muhammad Usman Ghani Khan on detection of rare and lethal skin cancer Acral Lentiginous Melanoma.
- In this research project we developed a system which detects and predicts the probability of acral melanoma in dermoscopic images.
- Designed a DCNN architecture from scratch in Keras and Tensorflow to classify the skin cancer

### Wizdojo Technologies, National Incubation Center

Lahore, Pakistan

COMPUTER VISION INTERN

Aug 2019 - Oct 2019

- Worked with Dr. Umair Mateen Khan in his startup as a Computer Vision Intern and developed a vehicles registration plate detection system.
- Collected, annotated, and processed data and trained a custom deep learning model to detect and segment the vehicle registration plate.
- Built a small website for the startup using HTML/CSS and Bootstrap and WordPress

### Department of Computer Science, Government Islamia College Railway Road

Lahore, Pakistan

COMPUTER SCIENCE LECTURER

Nov 2018 - May 2020

- Taught introductory undergraduate courses
- Operating Systems and Networks
- Programming and Intro to Databases

### Computer Vision & Machine Learning Lab, Al-Khawarizmi Institute of Computer Sciences

Lahore, Pakistan

DEEP LEARNING INTERN

Sep 2018 - Oct 2018

- Built a small image classification neural network using Keras using cars dataset from Google Images
- Learnt about Deep Learning and Computer Vision Basics.
- Developed interfaces of classification systems using HTML/CSS and bootstrap

## Publications

1. **Qaiser Abbas**, Farheen Ramzan, and Muhammad Usman Ghani. "Acral melanoma detection using dermoscopic images and convolutional neural networks." Visual Computing for Industry, Biomedicine, and Art 4.1 (2021): 1-12.
2. "Detection and Classification of Malignant Melanoma using Deep Features of NASNet", **Qaiser Abbas**, Anza Gul [[Under Review at 'Springer Nature Computer Science'](#)]
3. "IoT Based Low-Cost Intelligent Surveillance System for Smart Home Security", **Qaiser Abbas**, Anza Gul [[Under Review at 'Journal of Ambient Intelligence and Smart Computing'](#)]
4. "Machine Learning based Smart Network Intrusion Detection System for SMEs in Developing Countries", **Qaiser Abbas**, Sadaf Hina, Hamza Sajjad [[Under Process'](#)]
5. "An efficient deep learning based system for automated pneumonia classification", **Qaiser Abbas**, Abqa Javed, Muhammad Irzam [[Under Process'](#)]

## Projects

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### Melanoma Segmentation in dermoscopic images using Deep Learning

Lahore, Pakistan

PROJECT LEADER

January 2020

- Developed a melanoma skin lesion detection and segmentation system using TensorFlow and Keras.
- Used Mask R-CNN model and utilized transfer learning with ResNet50 on ISIC 2019 dataset to segment the melanoma lesions.

### Firearms Detection and Classification using Deep Learning

Lahore, Pakistan

PROJECT LEADER

February 2020

- Developed a complete Firearms detection and classification system using TensorFlow and Keras.
- Yolo v3 model along with transfer learning was trained on IMFDB + custom dataset to detect and classify the firearms.

### Emergency Vehicles Classification using Convolutional Neural Network

Lahore, Pakistan

DEVELOPER

December 2019

- Developed an emergency vehicles classification system using a simple CNN architecture.
- Trained a Custom CNN model to detect and classify the vehicles using own dataset.

## Technical Skills

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MY CORE TECHNICAL SKILLS INCLUDE:

- Python, C, C++
- Keras / TensorFlow / OpenCV
- Machine Learning and Vision
- Research and Development
- Wordpress / HTML / CSS / Bootstrap
- Ubuntu, Kali Linux

## Honors & Awards

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2019	<b>Excellence Scholarship</b> , by DHA Lahore for 1st position in BS (120k PKR)	Lahore, Pakistan
2019	<b>Fauji Foundation Excellence Award</b> , by Fauji Foundation for 1st position in BS (30k PKR)	Mianwali, Pakistan
2018	<b>Gold Medalist</b> , BS in Information Technology	Sargodha, Pakistan
2015-18	<b>Fauji Foundation Educational Scholarship</b> , Got Scholarship throughout my undergraduate studies	Sargodha, Pakistan
2014-18	<b>Teaching Assistant</b> , Assisted teachers during BS in delivering lectures and marking quizzes	Mianwali, Pakistan
2014-18	<b>Class Representative</b> , Represented my class for four years during undergraduate studies	Mianwali, Pakistan

## Professional Services

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2021	<b>Reviewer</b> , Visual Computing for Industry, Biomedicine, and Art	Singapore
2021	<b>Reviewer</b> , Informatics in Medicine Unlocked	United Kingdom

## Social Services

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2016-18	<b>Blood Donation Society</b> , Arranged a blood donation society in University of Sargodha	Mianwali, Pakistan
2018 -	<b>Promoting Education in Remote Areas</b> , Volunteer work to promote education in remote areas of Pakistan.	Lahore, Pakistan
2016-18	<b>Career Guidance Seminars</b> , Arrangement of Career Counseling Seminars in University of Sargodha.	Mianwali, Pakistan
2016-18	<b>Freelancing Guidance Seminars</b> , Arrangement of Freelancing guidance Seminars in University of Sargodha.	Mianwali, Pakistan

## References

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- **Prof. Dr. Muhammad Usman Ghani Khan**  
Professor  
Department of Computer Science, University of Engineering and Technology Lahore, Pakistan  
Email - usman.ghani@uet.edu.pk
- **Prof. Dr. Muhammad Aslam**  
Professor  
Department of Computer Science, University of Engineering and Technology Lahore, Pakistan  
Email - maslam@uet.edu.pk
- **Dr. Sadaf Hina**  
Assistant Professor  
Department of Computer Science, University of Engineering and Technology Lahore, Pakistan  
Email - sadaf.hina@uet.edu.pk