

# Qaiser Abbas

RESEARCH ASSISTANT AT BIOINFORMATICS RESEARCH LAB, LAHORE

Lahore, Pakistan

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## Summary

An energetic Deep Learning Enthusiast having remarkable skills and experience working with the latest computing technologies and artificial intelligence including Python, Deep Learning, Computer Vision and Machine Learning. Currently serving as Masters Research Assistant at the Bioinformatics Research Lab, Al-Khawarizmi Institute of Computer Science, University of Engineering and Technology Lahore Pakistan. My research interests are Object Detection, Computer Vision, Machine Learning, Deep Learning and Image Processing

## Education

### M.S in Computer Science

Lahore, Pakistan

UNIVERSITY OF ENGINEERING AND TECHNOLOGY LAHORE, LAHORE

3.78/4.0 CGPA – 94.25%

2018 - 2020

THESIS: ACRAL LENTIGINOUS MELANOMA DETECTION IN DERMOSCOPIC IMAGES USING DEEP LEARNING

### B.S in Information Technology

Sargodha, Pakistan

UNIVERSITY OF SARGODHA, SARGODHA

3.63/4.0 CGPA – 90%

2014 - 2018

FINAL YEAR PROJECT: DETECTION AND CLASSIFICATION OF EMERGENCY VEHICLES

## Experience

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

Lahore, Pakistan

RESEARCH ASSISTANT

Jan 2020 - Present

- Working with Dr. Usman Ghani on detection and prediction of one of the rare and lethal skin cancer Acral Lentiginous Melanoma in dermoscopic images. In this research project we are developing a system which will detect and predict the melanoma in dermoscopic images.
- Designed a CNN from scratch in Keras and Tensorflow to classify the skin cancer
- Extensive image processing and data augmentation is applied to improve the classification accuracy of the automated system.
- Besides this I am also working on review paper related to Melanoma Detection and Classification.

### 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 and developed a vehicles registration plate detection system.
- Trained a custom Mask R-CNN model to detect and segment the vehicle plate where our objective was to read the numbers in registration plate.
- Built a small website for the startup using HTML/CSS and Bootstrap and Word-press
- Learnt about OpenCV and Data Science in great detail under kind supervision of Dr Umair.

### 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 from Stanford CS231n-Convolutional Neural Networks for Visual Recognition course.
- Developed interfaces of classification systems using HTML/CSS and bootstrap
- Learnt practical aspects of the applied deep learning in computer vision.

## Lectureship

### Governament Islamia College Railway Road Lahore

Lahore, Pakistan

COMPUTER SCIENCE LECTURER

Nov 2018 - Present

I am currently serving as a Computer Science Lecturer in Computer Science Department where I teach undergraduate students,

I have taught following introductory courses to undergraduate students:

- Introduction to Computer and Information Technology
- Operating Systems
- Computer Networks
- Databases
- Introduction to Computer Programming

## Publications

1. "Acral Melanoma Detection in Dermoscopic Images using deep learning", [Qaiser Abbas](#), Usman Ghani Khan, Farheen Ramzan [[Under Process](#)]
2. "Malignant Melanoma Classification in Dermoscopic Images using Convolutional Neural Network", [Qaiser Abbas](#), Farheen Ramzan, Aown Muhammad [[Under Process](#)]
3. "Detection and Classification of Emergency Vehicles in Images", [Qaiser Abbas](#), Aown Muhammad, Muhammad Ishtiaq [[Under Process](#)]

## Projects

### Melanoma Segmentation using Deep Learning

Lahore, Pakistan

PROJECT LEADER

January 2020

- Developed a complete melanoma skin lesion detection and segmentation system using Tensorflow and keras library.
- Guided two of my group members in development and research during this project
- Used Mask R-CNN model and trained it on ISIC 2019 dataset to segment the melanoma lesions.
- ResNet 50 was used in our transfer learning process.

### Firearms Detection and Segmentation using Deep Learning

Lahore, Pakistan

PROJECT LEADER

February 2020

- Developed a complete Firearms detection and classification system using Tensorflow and keras library.
- Developed it as a term project in my Machine Learning course.
- R-CNN model was used and it was trained on IMFDB dataset to detect and classify the firearms.
- ResNet 101 was used in our transfer learning process.

### Vehicles Detection and Classification using Convolutional Neural Network

Lahore, Pakistan

DEVELOPER

December 2019

- Developed a vehicles detection and classification system using Keras library.
- Developed a CNN model and trained it on Stanford cars dataset to detect and classify the vehicles.
- VGG16 was used in transfer learning process.

## Technical Skills

SOME OF MY CORE TECHNICAL SKILLS INCLUDE:

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

## Honors & Awards

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

## Social Services

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
2018 -	<b>Social Media Service</b> , Social Media service to promote higher education in 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

AVAILABLE UPON REQUEST