

# Qaiser Abbas

MACHINE LEARNING AND VISION ENGINEER, LAHORE ·

Lahore, Pakistan

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## Summary

An energetic Machine Learning and Vision enthusiast having 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 USING DERMOSCOPIC IMAGES AND CONVOLUTIONAL NEURAL NETWORKS

### 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 - 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 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 Word-press

### 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

## Lectureship

### Government Islamia College Railway Road Lahore

Lahore, Pakistan

COMPUTER SCIENCE LECTURER

Nov 2018 - May 2020

Served as a Computer Science Lecturer in Computer Science Department.

I 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 using Dermoscopic Images and Convolutional Neural Networks", **Qaiser Abbas**, Farheen Ramza, Muhammad Usman Ghani Khan [Submitted to Elsevier Journal 'Tissue and Cell']
2. "A Computer Aided Diagnosis system for early detection of melanoma in dermoscopic images using deep Convolutional Neural Network", **Qaiser Abbas**, Farheen Ramzan, Aown Muhammad [Under Process]
3. "A Detection and Classification of Emergency Vehicles based on deep learning", **Qaiser Abbas**, Aown Muhammad, Muhammad Ishtiaq [Under Process]

## Projects

### Melanoma Segmentation 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 Segmentation using Deep Learning

Lahore, Pakistan

PROJECT LEADER

February 2020

- Developed a complete Firearms detection and classification system using Tensorflow and keras library.
- R-CNN model along with transfer learning (ResNet101) was used and it was trained on IMFDB dataset to detect and segment the firearms.

### Vehicles Detection and Classification using Convolutional Neural Network

Lahore, Pakistan

DEVELOPER

December 2019

- Developed a vehicles detection and classification system using Yolo V3.
- Collected and annotated dataset and trained a Yolo v3 to detect and classify the vehicles.

## Technical Skills

SOME OF 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

- |         |   |                    |
|---------|---|--------------------|
| 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

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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   |
| 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