

Qaiser Abbas

MACHINE LEARNING AND VISION ENGINEER

Lahore, Pakistan

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Summary

An energetic Machine Learning and Vision enthusiast having skills and experience working with the latest artificial intelligence technologies including Machine Learning, Vision and Deep 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 Machine Learning, Vision and their applications including but not limited to medical image analysis, object recognition, detection and segmentation.

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

Department of Computer Science, Government Islamia College Railway Road

Lahore, Pakistan

COMPUTER SCIENCE LECTURER

Nov 2018 - May 2020

- Taught following courses to undergraduate classes
- 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. "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. "Detection and Classification of Emergency Vehicles based on deep learning", Qaiser Abbas, Aown Muhammad, Muhammad Ishtiaq [[Under Process](#)]

Projects

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 library.
- Yolo v3 model along with transfer learning (ResNet101) was used and it was trained on IMFDB 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.
- Collected and annotated dataset and trained a Custom CNN model 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	Excellence Scholarship , by DHA Lahore for 1st position in BS (120k PKR)	Lahore, Pakistan
2019	Fauji Foundation Excellence Award , by Fauji Foundation for 1st position in BS (30k PKR)	Mianwali, Pakistan
2018	Gold Medalist , BS in Information Technology	Sargodha, Pakistan
2015-18	Fauji Foundation Educational Scholarship , Got Scholarship throughout my undergraduate studies	Sargodha, Pakistan
2014-18	Teaching Assistant , Assisted teachers during BS in delivering lectures and marking quizzes	Mianwali, Pakistan
2014-18	Class Representative , Represented my class for four years during undergraduate studies	Mianwali, Pakistan

Social Services

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

References

- **Dr. Muhammad Usman Ghani Khan** Associate Professor UET Lahore, Pakistan (email - usman.ghani@uet.edu.pk)
- **Dr. Sheikh Faisal Rasheed** Assistant Professor UET Lahore, Pakistan (email - shfaisal@gmail.com)
- **Malik Ghulam Sarwar** Program Coordinator, HEC Islamabad, Pakistan (email - gsarwar@hec.gov)