




MUHAMMAD BILAL

Deep Learning Researcher

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 Pakistan  Attock City, Punjab

PERSONAL STATEMENT

- Team player with a can-do attitude, hardworking, and lifelong learner!
- Research interests includes Deep Learning, Reinforcement Learning and Computer Vision.
- Motivated to find a challenging role in a learning environment with more responsibilities where I can contribute more strongly toward the research and development.

EDUCATION

COMSATS University Islamabad, Pakistan

Master of Science in Computer Science - MS(CS)

Attock Campus

September 2018 – January 2021

- CGPA: 3.42/4.0

COMSATS University Islamabad (Formerly CIIT), Pakistan

Bachelor of Science in Software Engineering - BS(SE)

Attock Campus

January 2014 – January 2018

- CGPA: 2.95/4.0

PUBLICATIONS

A Transfer Learning-Based Efficient Spatiotemporal Human Action Recognition Framework for Long and Overlapping Action Classes

July, 2021

Springer Nature: The Journal of Supercomputing, vol. 78(2) pp. 2873-2908

Muhammad Bilal, Muazzam Maqsood, Sadaf Yasmin, Najam Ul Hasan & Seungmin Rho - [DOI](#)

An Activity Recognition Framework for Overlapping Activities using Transfer Learning

December, 2020

IEEE: 2020 International Conference on Computational Science and Computational Intelligence (CSCI) pp. 701-705

Muhammad Bilal, Muazzam Maqsood, Irfan Mehmood, Mubashir Javaid & Seungmin Rho - [DOI](#)

SCIENTIFIC SERVICES

Peer Reviewer for *The Journal of Supercomputing*, Springer Nature —  [ORCID](#)  [Publons](#) . 2022

TECHNICAL SKILLS

Languages: Python, C++, Swift

Libraries: TensorFlow, OpenCV, SciKit-Learn, NumPy, Pandas, Matplotlib

Developer Tools: PyCharm, Jupyter Lab, Google Colab, VSCode, XCode(iOS app development), Linux

Reserch: Deep Learning, Computer Vision

LANGUAGES

Urdu Native
English Proficient
Punjabi Mother Tongue

PROJECTS

A Deep Learning Based Action Recognition Framework for Surveillance Videos 2019 – 2020 *MS Thesis*

- A Deep Learning based spatiotemporal Human Activity Recognition framework using Transfer Learning techniques with Convolutional Neural Network (CNN) models, Deep Autoencoder, and Recurrent Neural Network (RNN) with Long Short-Term Memory (LSTM). This system resolves the overlapping actions / activities classes issues in long visual data streams in non-stationary surveillance environments. It was developed using Python programming with TensorFlow and OpenCV frameworks.

Algorithms Encyclopedia 2018 *Android and iOS App*

- A mobile application for android and iOS platforms that serves as an encyclopedia of algorithms. These apps provide the details of data structure algorithms, their time complexities, pseudocode, java code with examples, and also provides searching and bookmark capabilities. The android app was developed using Android Studio and Java programming. The iOS app was developed in XCode IDE and Swift programming language.

An Efficient Stock Market Prediction using Machine Learning Classifiers 2017 – 2018 *BS Final Year Project*

- A web-based system for time-series stock market forecasting of Karachi Stock Exchange (KSE) using Linear Regression. This system provides one-step and multi- step ahead forecasting for KSE indexes of 24 companies from 5 sectors. Java programming language was used for the machine learning task. J2EE was used as server-side programming. HTML, CSS, JavaScript, jQuery and Bootstrap was used for client-side programming. This system runs on Apache Jakarta-Tomcat Server.

GREENLANCERS 2016 *Web Engineering semester project*

- A website for Pakistani freelancers using HTML, CSS, JavaScript, jQuery, Bootstrap, PHP, SQL and XAMPP.

Online Election System 2015 *Database Systems semester project*

- An e-voting system semester project using MS Access.

REFERENCES

Dr. Muazzam Maqsood

Assistant Professor

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COMSATS University Islamabad, Attock Campus, Pakistan

Dr. Muhammad Tahir

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