

MUHAMMAD RASHID

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SUMMARY

Computer Engineer with experience in Machine Learning, Deep Learning, Game Development and Data Analytics. Experienced in implementing Machine Learning models on GPU, working with Parallel/Distributed Systems. Exposure to building data models and applying learning algorithms.

EDUCATION

Ghulam Ishaq Khan Institute (GIKI) of Engineering Sciences & Technology, Topi, Pakistan *June 2020*
M.S. Computer Engineering (CE)
Thesis title: Document Bleed-Through Removal Using ConvNets

University of Engineering & Technology (UET), Peshawar, Pakistan *Dec 2016*
B.Sc. Computer Systems Engineering (CSE)
Final year project: Modelling Reachability in Transport Networks in a Linked View Environment

TECHNICAL STRENGTHS

Software & Tools Matlab 2019b, Unity, MS Office, Adobe After Effects, Photoshop, Illustrator
Hadoop, HDFS, NDFS, Sqoop, Hive, SQL, YARN, Microsoft Azure, Git, Bitbucket.
Languages Python3, Java, SQL, Pytorch, Scikit-Learn, Pandas, Cuda, OpenCV, C#, C++,
D3.js, HighCharts, Latex, Google Colab, Tensorflow, Keras, Jupyter, HTML & CSS

RESEARCH EXPERIENCE

Graduate Research Assistant Computer Engineering, GIKI Topi 2018-2019
Research Advisor: Associate Professor. Engr. [Dr. Sajid Anwar](#)

- Perused knowledge & experience in field of deep learning especially computational complexity of convolution neural networks and computer vision during my master research. Also gained excellent knowledge of various Deep Learning tools and frameworks like, Matlab, Python, Tensorflow, Google Colab.

Undergraduate Research Computer Systems Engineering, UET Peshawar 2012-2016
Research Advisor: Assistant Professor. Engr. [Dr. Rehmat Ullah](#)

- Gained experience in the field of Data Science and Visualization by working with the D3.js library to model reachability in transportation networks. (Carto)graphic representations; a distance line, a time line, a time cartogram, a time prism and a spatial map were used in an immersive linked-views environment for visualization of Overijssel, Netherland train transportation network.

PROFESSIONAL EXPERIENCE

Data Scientist at Emlaak Marketing (pvt) Ltd , Islamabad, Pakistan Jan 2021-Present
[Emlaak Marketing](#)

Plan and carry out coordinated branding or direct response digital marketing strategies, such as new blog updates, social network ads, display/banner advertising, smartphone and video marketing (video editing, adding motion graphics to the videos), online content management, social media management, web analytics and track KPIs.

Research Assistant at Predictive Analytics Lab, SZABIST- Islamabad, Pakistan

Oct 2020-Dec 2020

Principle Investigator(PI): Associate Professor. [Dr. Muhammad Usman](#)

- My responsibilities included conducting literature reviews, collect and analyze data, develop interactive dashboard, prepare materials for submission to the granting agencies and foundations for Sindh (Province) health department and other government agencies.
- Developed an interactive dashboard for health department by doing front-end in HTML,CSS, javascript and High Charts while back-end using ASP.NET and, finally applying predictive analytics to the currently available data at Division, District and Union Council (UC) level.

Jr. Software Developer at Slingshot Studios,Jolta Technologies, Rawalpindi, Pakistan

March 2017 - August 2017

Worked on game simulations and arcade 2D/3D games here.Applying physics to bodies in-game, designing game icon and environment, C# programming language to develop games in Mono-Develop environment in Unity 2D/3D.Tilt Ball Classic 2D, City Parking Hero 3D by [Catapult Games](#) (profile name) were some of the games designed and created by me that are worth noting.

PROJECTS

- **Modelling Reachability in Transport Networks in a Linked View Environment**

This was my Bachelor's final year project, where the method is explained in this research using railroad network data from the Dutch province of Overijssel Netherland, using alternative visual representations in interactive linked-views to gain valuable insights.A prototype was created in a web environment using D3.js and can be extended to any transportation network.

Document Bleed-Through Removal Using ConvNets

The goal of this research project was to eradicate bleed-through in bleed-through documents. In the research we applied different ML techniques to the bleed-through documents like Classification using CNN, auto encoders, Semantic Segmentation using fully convolutional neural network.

Facial Recognition with Different Algorithms

As a semester project, used numerous Face Recognition Algorithms such as the Local binary pattern histogram, eigenfaces, and fisherfaces and earned an excellent score.

DNA Challenge of Motif Finding

Challenge here was to find motif in DNA sequence semester course of bio-informatics. Where I worked on strings reconstruction from k-mers, using overlap, De-Bruijn graph.

TEACHING EXPERIENCE (GRADUATE TEACHING ASSISTANT)

- CS312 System Programming Recitation instructor for 26 undergraduates(01/2018-05/2018)
- CS341 Signals & Systems Recitation instructor for 32 undergraduates (09/2018-12/2018)
- CS325 Software Engineering Recitation instructor 28 undergraduates (01/2019-05/2019)
- CS101L OOP-Lab instructor for 48 students(09/2019-12/2019)

Coordinated and conducted the above-mentioned courses at the undergraduate level in GIK Institute, Pakistan. My responsibilities included being receptive to the students, resolving students' problems, conducting quiz's and exams marking, take students attendances, schedule and reschedule classes, update CMS.

MAJOR SUBJECTS

1. Computer Vision & Machine Learning
2. Advance Artificial Intelligence
3. Big Data Analysis
4. Bio-Informatics
5. Digital Image Processing
6. Intro to Game Development
7. Computer Security