

# Muhammad Rashid

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## Highlights

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**Languages:** Python, MATLAB, R, C, C#, SQL, HTML, JavaScript.

**Skills:** Machine Learning (regression, classification, clustering), Dimension Reduction (PCA), Deep Learning models (CNN, FCN), Data mining on time series, Textual data/Documents, Data structures and algorithms, Statistical machine learning (hypothesis testing, nonparametric regression etc.), TensorFlow, PyTorch, Hadoop, MapReduce, PostgreSQL, NumPy, SciPy, AWS S3, EC2, building web applications (RESTful API, flask application), MySQL, Extract, Transform and Load (ETL), Tableau, Matplotlib, Seaborn, High Charts, .NET, Project Management, Leadership;

**Selected Courses:** Applied Machine Learning, Data Mining, Prob. & Statistics for Analytics, Intro. to Big Data Architecture, Big Data Process & Cloud Services, Info. Visualization, Database Modeling, Design & Implementation, Data Warehousing

## Education

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**M.S in Applied Data Science (ADS)**, Clarkson University, NY, USA 08/22-08/23

**M.S in Computer Engineering (CE)**, GIK Institute, Topi, Pakistan 01/18-06/20

*Thesis Title:* Document bleed-through removal using ConvNets - CNN

**B.Sc. in Computer Systems Engineering (CSE)**, UET Peshawar, Pakistan 08/12-12/16

*Final Year Project:* Modeling reachability in transport networks in a linked view environment using D3.js.

## Professional Experience

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**Graduate Assistant**, *Department of Data Analytics, Clarkson University, NY* 08/22-present

- Designed CNN model to correctly detect the drawn image by the user through Flask application. CNN model trained for fashion accessories dataset of quickdraw images.
- Co-led recitations, designed curriculum and conducted office hours for undergraduate and graduate level ML and data analytics courses to 100+ students. Courses included applied data analytics, BI & data analytics, app development, process, and system analysis.

**Data Scientist**, *Emlaak Marketing (pvt) Ltd. Islamabad, Pakistan* 01/21-04/22

- Deployed ML and statistical inference models to track real time sales and correlation to advertisements impact. This enabled the marketing team to correctly target customers and led to 20% sales increase.

**Research Assistant**, *PA lab. under National Center for Big Data and Cloud Computing (NCBC), Pak* 08/20-12/20

- As a part of team, developed an interactive dashboard for Provincial Govt that used ML models trained on geographical health indicators, hospital, and patient data for prediction & forecasting of future needs. Implemented data visualizations for govt officials to estimate monthly, weekly and quarterly health indicators.

**Graduate Research Assistant**, *Machine Intelligence Research Group (MInG), GIK Institute, Pakistan* 01/18-12/19

- Designed ConvNets based CNN Pipeline to improve document bleed through removal. This involved textual data pre-processing, training various CNN models, and careful model selections.
- Worked with 3D U-Net for the purpose of brain tumor segmentation. Investigated pre-processing methods for MR images for tumor segmentation enhancement.

**Internship: Jr. Software Engineer**, *Slingshot Studio, Jolta Technologies, Pakistan* 03/17-08/17

- Developer, designed 2 android games with different terrains, icons, and screenshots. Applied game physics (game programming) using Unity 2D/3D environment.

## Projects

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- Quick-draw image recognition using fashion doodles dataset.
- ADS-B exchange data sets – Data Analysis.
- Lady health worker program dashboard design with predictive analytics.
- Modeling reachability in transport networks in a linked view environment using D3.js [[others](#)] ...