Syed Muhammad Bilal
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GitHub LinkedIn LeetCode HackerRank

Academic Qualification

2020 - Present	BS Computer Science	FAST-NUCES	3.27 / 4.0 CGPA
2018 - 2020	Intermediate	Adamjee Science College	A - ONE GRADE
2008 - 2018	Matriculation	St. Patrick's High School	A - ONE GRADE

Major Academic Projects:

Exploring Unsupervised Learning for Facial Recognition and Clustering using Autoencoders

April 2023 – May 2023

- Investigated the effectiveness of unsupervised learning on CelebA and CASIA Webface datasets.
- Used various autoencoders such as AE, VAE, AAE to generate facial embeddings, and loss such as MSE.
- Clustered the data using techniques such as K-means clustering, DBSCAN, Hierarchical Agglomerative Clustering.
- Created an application based on Laravel and Flask, hosted locally, to test the clustering of people.
- Wrote a research paper and concluded findings of our projects. (LINK)

Mighty Rides - Car Trading Web Application

Oct 2022 – Dec 2022

- Created a car trading platform.
- Developed back-end using PHP and MySQL.
- Utilized front-end using HTML, CSS, and JavaScript.
- Built system with two user interfaces focusing specifically on dealers and buyers.
- Allowed customers to view listings from a diversity of dealers.

Statistical Analysis and Prediction – Health Diseases

April 2022 – May 2022

- Preprocessed the heart dataset from Kaggle and derived meaningful information from it.
- Developed a prediction model based on the hypothesis and concluded z-test and t-tests.
- Used Linear regression, Pearson's Correlation Matrix, and graphical representation of data using Python and Pandas.

Personal Projects:

The Computer World:

August 2023

- Designed and implemented a feature-rich computer hardware store using the MERN stack and Redux Toolkit.
- Key features include a responsive React frontend with state management using Redux Toolkit, a robust Express.js backend with MongoDB for data storage, and seamless PayPal integration for secure transactions.
- Achievements include optimized performance, user authentication, and scalable architecture.

TO-DO List MERN:

June 2023

- *Developed a feature-rich TO-DO List / Task Manager web application using the MERN (MongoDB, Express.js, React, Node.js) stack.*
- *Developed a RESTful API using Express.js for handling CRUD operations on tasks.*
- *Ensured data integrity and improved user experience through input validation and error handling.*

Special Courses:

- IBM Data Warehouse Engineer Professional Certificate: Introduction to Data Engineering
- IBM Data Warehouse Engineer Professional Certificate SQL: A Practical Introduction for Querying Databases
- Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning: Convolutional Neural Networks in TensorFlow
- Deep Learning Specialization: Neural Networks and Deep Learning

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Technical Skills:

- **Languages and Framework:** Python, JavaScript, C / C++, NodeJS, JWT, Express, React, EJS, Django, CSS, Bootstrap, PHP, React Bootstrap.
- **Database:** MySQL, Oracle Express and MongoDB, MongoDB Atlas, Mongoose.
- **ML/DL Libraries:** TensorFlow, Pandas, NumPy, Matplotlib, Beautiful Soup, OpenCV
- **Stacks:** MERN

Link to my above-mentioned and some of the other relevant key projects and certifications:
https://drive.google.com/drive/folders/1QB4biAIYJ82V5kwY_8e6fZME8y40NSPB?usp=share_link