MOHAMMAD ADNAN

+971543726434 | adnan.bava123@gmail.com | Linkedin: /mohammad-adnan/ | Github: Adnan-bava | Portfolio

SKILLS

- **Languages and Tools** : Python, SQL, Power BI, Tableau
- **S/W & Frameworks** : Pandas, Numpy, Scipy, Sklearn, Tensorflow, PyTorch, NLTK, Transformers

PROJECT EXPERIENCE

Hybrid GCN & XGBoost Taxi Fare Prediction and GA for Vehicle Allocation (View)

Geopandas, Sklearn, XGBoost, Pytorch, GNN, Streamlit *Jun 2024 - Nov 2024*

- Addressed **fare estimation** and vehicle allocation challenges caused by weather and dynamic spatial-temporal demand patterns in NYC's **e-hailing industry** by **collaborating** with my supervisor to refine objectives and align solutions.
- Developed and deployed a hybrid model integrating **Graph Convolutional Networks (GCN)** for spatial analysis, **XGBoost** for regression, and **Genetic Algorithms** for optimizing vehicle allocation.
- Improved fare accuracy **(RMSE: 2.13, MAE: 0.56)**, optimized resource allocation, boosted revenue, and deployed a **Streamlit app** for real-time predictions and decision-making.

Spell Checker for Cancer Research (View)

NLTK, Transformers, BERT, Tkinter, PyTorch *Sep 2024 - Nov 2024*

- Developed a spell-checker for cancer-related text, combining **edit distance**, **bigram models**, and **DistilBERT**, achieving **99.88%** validation accuracy for medical terms correction which was trained using **GPU**.
- Delivered a **Tkinter-based** GUI with real-time feedback, color-coded error highlighting, and medical word suggestions, ensuring user-friendly interaction.
- The system demonstrated high precision in medical text corrections, and efficient real-time performance through optimized algorithms and lightweight **transformer models**.

Lending Club Loan Prediction Using Deep Neural Networks (View)

Sklearn, Tensorflow, SMOTE, Hyperparameter Tuning *Aug 2024 - Oct 2024*

- Designed and implemented a **Deep Neural Network (DNN)** model using **TensorFlow** for loan default classification, achieving **98.17%** accuracy and an **F1-score of 0.98** on the Lending Club dataset.
- Addressed class imbalance using **SMOTE & hyperparameter tuning** improving minority class (loan defaults).
- Identified complex patterns in large datasets, outperforming traditional models for smarter lending decisions.

EDUCATION

Asia Pacific University of Technology & Innovation **Kuala Lumpur, Malaysia**

Master of Science in Data Science and Business Analytics *Oct 2023 - Nov 2024*

NMAM Institute of Technology **Karnataka, India**

Bachelor of Engineering in Computer Science *Aug 2019 - Aug 2023*

CERTIFICATES

BCG X Data Science Job Simulation on Forage (View)

Machine Learning, Hypothesis Tesing, Feature Eng., Problem Solving *Dec 2024 - Dec 2024*

- Analyzed customer churn using Python, confirmed consumption patterns as the key driver through **hypothesis testing**, and optimized a Random Forest model with **99%** accuracy and an **F1-score of 0.97** for actionable insights.

Introduction to Data Science by Cisco Networking (View)

Data Analytics, Data Models, Machine Learning, AI *Nov 2024 - Dec 2024*

- Gained a strong understanding of data analytics principles, challenges, opportunities, and the role of data in AI and ML.

PERSONAL DETAIL

- **Emirates ID** : 784-2000-1041535-2 (Golden Card)
- **Address** : Mussafah, Abu Dhabi, UAE