Assem Maher Salama

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EDUCATION

Queen's University   Ontario-Canada
Master of Science – MS, Data Science and Artificial Intelligence   (Jan 2024 - December2024)
- Grade: 4.1/4.3
- Thesis: Analyzing the Impact of Prompts on LLM-Driven Code Translation Using Causal Inference
- Relevant Courses: Machine Learning, Deep Learning, Reinforcement Learning, Big Data & Cloud Computing, Data Mining, Data Analytics

Canadian International College-CIC || Cape Breton University   Cairo-Egypt
Bachelor of Electronics and Communications Engineering   (Oct 2016 - May 2021)
- Grade: 3.1/4.0
- Relevant Coursework: Statistics, Probability, Discrete Mathematics
- Graduation Project: Implemented a 2x2 MIMO-OFDM system using USRP and LabVIEW

PROFESSIONAL EXPERIENCE

Vodafone Egypt
IP Datacom Network Engineer   (September 2023 - present)
- Resolve access policy issues for remote teams, ensuring seamless server connectivity.
- Monitor and troubleshoot network alarms on routers, switches, and firewalls to maintain uptime.
- Deploy configuration scripts to enforce access policies and enhance network security.

Transmission Front Office Engineer   (March 2023 - August 2023)
- Provided technical support for TX access and backhaul (BH) operations across 2G/3G/4G sites.
- Diagnosed and resolved transmission-related incidents, to reduce downtime.
- Coordinated with cross-functional teams to address global network outages within SLA timelines.

PROJECTS

Volatility Forecasting in India
- Developed a GARCH time-series model to predict asset volatility; integrated SQLite for data storage and built a custom API for predictions.

A/B Testing for Program Enrollment (WorldQuant University)
- Executed chi-square testing to evaluate email campaign effectiveness; designed Python ETL pipelines and an interactive data app.

Customer Segmentation in the US
- Implemented k-means clustering and PCA for consumer segmentation; deployed an interactive dashboard using Plotly Dash.

Bankruptcy Prediction in Poland
- Engineered random forest and gradient boosting models to forecast bankruptcy; addressed class imbalance via resampling and optimized precision-recall metrics.

Earthquake Damage Assessment in Nepal
- Built logistic regression and decision tree models to predict structural damage, identified and mitigated biases in SQLite datasets.

Air Quality Prediction in Nairobi
- Created ARMA time-series models to forecast particulate matter levels; leveraged MongoDB and PyMongo for data extraction.

Supply Chain Analysis for Faasos
- Conducted SQL-driven analysis of order data to optimize driver pickup times and inventory management.

SKILLS

Programming: Python (scikit-learn, NumPy, pandas, matplotlib), OOP, Design pattern
Big Data: SQL, MongoDB
Machine Learning: Regression, Classification, Clustering, Dimensionality Reduction, Anomaly Detection
Data Science Techniques: A/B Testing, ETL, Data Cleaning, Feature Engineering, Hypothesis Testing, APIs
Time Series Analysis: ARMA, GARCH, Forecasting Models
Software Tools: Linux, Git, Plotly Dash