SYED DANISH AHMED

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Education

CARNEGIE MELLON UNIVERSITY — Pittsburgh, PA
Master of Information Systems Management, BIDA – Data Science, **QPA: 3.89** — Dec 2020
Relevant Courses: Machine Learning, Artificial Intelligence, Unstructured Data Analytics, Statistics, Econometrics, Business Analytics

S.G.S.I.T.S — Indore, India
Bachelor of Engineering in Information Technology, GPA: 3.81/4.00 (First Class with Distinction) — Jun 2015

Skills

- **Machine Learning:** Regression, Classification, Segmentation, Dimensionality Reduction, Gradient Boosting, Deep Learning - DNN, CNN, RNN
- **Functional:** Natural Language Processing, Anomaly Detection, Time Series Forecasting, A/B Testing, Agile, Scrum
- **Languages:** Python, Java, R, SQL
- **Business Intelligence and Visualization Tools:** R Shiny, Tableau, Power BI
- **Data Engineering & Model Deployment Tools:** IBM MQ, Flask, Azure ML, Hadoop, PySpark, AWS, MongoDB

Academic Experience

CARNEGIE MELLON UNIVERSITY — Aug 2019 – Present

- Developed a model for Musculoskeletal Disorder physiotherapy exercise recognition using sensor data from accelerometers
  - Implemented a 1D Time Distributed CNN – LSTM architecture using Keras and Tensorflow & achieved AUC of 97% over seven classes
- Developed a Deep Learning – 2D CNN classifier using PyTorch for apparel micro category recognition
  - The model achieved an overall accuracy of 89% on 21 micro-categories for five different apparel categories
- Implemented a Multilayer Perceptron (MLP) classifier for text-based Emotion Classification using Word2vec word embedding
  - The model was able to identify nine different emotions, like joyful, terrified, jealous etc. with an accuracy of 77%
- Implemented a Gradient Boosting classifier with PCA on Vesta's real-world high dimensional e-commerce transactions dataset
  - The model can improve the efficacy of fraudulent transaction alerts with an AUC of 94%
- Built predictive model to guide profitable loan investments using historical dataset for loans issued on LendingClub over a period of 4 years
- Implemented ML algorithms - Decision Trees, kNN, Logistic Regression, Neural Network from scratch in Python

Work Experience

PricewaterhouseCoopers (PwC) Digital Transformation and Innovation Center — Pittsburgh, PA
Data Science Research Intern — Jun 2020 – August 2020

- Developing a Machine Learning framework for fraud detection on transactional data using unsupervised Anomaly Detection techniques

MU SIGMA: Data Science provider for 140 Fortune 500 Companies — Bengaluru, India
Senior Decision Scientist – Data Science – Innovation Lab — Jan 2019 – May 2019

- Implemented Named Entity Recognition (NER) model using Bidirectional LSTM and ELMo embeddings for a Conversational AI system
  - Identified and extracted entities from conversation transcripts with an accuracy of 81% and deployed as a service using Flask
- Developed Shiny application to visualize high dimensional data using Hierarchical Voronoi Tessellations & Sammon Projection

Decision Scientist – Data Science – Innovation Lab — Sep 2017 – Dec 2018

- Created a real-time anomaly detection system for predictive maintenance of A/C units – density-based clustering & polynomial regression
- Automated the annotation process for a Customer Support Chat-Bot using Natural Language Processing based Topic Modelling algorithms
  - The Latent Dirichlet Allocation (LDA) model resulted in 27% more unanswered texts being mapped to their correct intents
- Developed and deployed a real-time microservice for auto-releasing incorrectly flagged financial transactions
  - Financial Messages (SWIFT) are picked from an IBM Message Queue and reviewed using Cosine Similarity matching algorithm

Trainee Decision Scientist – Data Science — Oct 2015 – Aug 2017

- Identified clusters of Online Advertisers to be targeted for monetizing the opportunity generated due to major events
  - Leveraged ARIMA time series forecasting to predict the baseline Spend dollar value with MAPE less than 9%
- Devised and implemented a Time Series Anomaly Detection framework for detecting Bot traffic and the associated timeframe
  - Deployed the pipeline on Azure ML for automating model refresh and Power BI report generation

Awards & Recognition

- Won the 3rd prize in Deloitte Case Challenge 2019 organized at CMU Heinz College — September 2019
- Dean's List for outstanding academic performance — June 2020
- Received multiple Mu Sigma Spot Awards for showcasing quality and timeliness in project execution — 2016, 2017, 2018