Manvitha Kola

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Professional Summary:

Data Analyst with 3+ years of experience with SQL, Python and Tableau. Currently pursuing Master's degree in Data Science. Involved in solving business problems to support analytical decisions across various business domains including Finance, HR and Supply Chain Management. Excellent Understanding of business operations and analytics tools for effective data intelligence and analyses.

Education:

2020 – 2021 **MSc in Computer Science (Data Science), Trinity College Dublin**
Relevant Modules: Machine Learning, Applied Statistical Modelling, ML Optimization, Scalable Computing, Text Analytics, Recommender Systems, Data Analytics
Thesis: Covid-19 Sentiment Analysis and its impact on Emerging Market

2013 – 2017 **B. Tech (Computer Science), Jawaharlal Nehru Technological University**
Grade: 76.1% - First Class with Distinction
Relevant Modules: Data Structures, Algorithm Design and Analysis, Information Retrieval Systems, Computer Networks, Cloud Computing and Data Mining

Technical Profile:

Programming skills	Python, TensorFlow, Keras, R, SQL, PL/SQL, C, Linux, Java, HTML, JavaScript
Machine Learning	Predictive Modelling, Deep Learning, Convolutional Neural Networks, Sequential Models, LSTM, GRU, Traditional Models (Ensemble, Ada-boost, Decision Tree), Hyper parameter tuning, NLP, Data cleansing and preprocessing, Anomaly detection, Time Series, Market Segmentation, PCA, Feature selection, Feature extraction, Clustering, Statistical Analysis, Hypothesis testing, A/B testing
Tools	Jupyter Notebook, PyCharm, RStudio, Tableau, Power BI, AWS EC2, Google Cloud Platform, SQL Developer, Eclipse, GitHub, Confluence, Putty, WinSCP
Databases	Oracle 11g, Oracle 12c, MySQL
Domain Knowledge	Finance, Supply Chain, Inventory, HR, Publishing, Rights and Royalties

Work Experience:

Associate Consultant, Apps Associates, India **Aug 2017 – Aug 2020**

- Developed Oracle Analytics Cloud (OAC) Machine Learning POCs for Inventory demand and Sales forecast using Regression analysis
- Designed Oracle Machine Learning prediction models for Cost Management Analytics by integrating features from other ERP modules including HR and Inventory using Elastic Net Linear Regression and Random forest techniques
- Implemented a proof of concept for Customer segmentation and churn prediction using Python (Linear Regression and XGBoost) and Tableau
- Developed various KPI metrics and created interactive visualizations and dashboards including Cost analytics, HR Employee, Order Management dashboards using Tableau
- Analyzed new business requirements to develop scalable enterprise solutions and delivered end-to-end Business Intelligence solutions from requirement gathering, acquiring domain knowledge, data warehouse design, data extraction, pre-processing, ETL (SQL, PL/SQL), Reporting and data visualization
- Possess excellent SQL skills and worked closely with other departments for better business domain understanding while enhancing my interpersonal and presentation skills.

Summer Intern, Hyderabad Software Enterprises Association, India **Mar 2016 – Jun 2016**

- Built IoT based smart shoe prototype using RaspberryPi and Android application
- Stood as one of the finalist in the product engineering and entrepreneurship program focused on IoT/Smart city solutions for product innovation
- Worked on end to end product lifecycle including market need identification, business opportunity validation, design thinking, technology design, solution and pitch presentation

Certifications:

- Tableau Desktop Specialist (Credential ID: 1020217)
- DeepLearning.AI - NLP with Classification and Vector Spaces (Credential:https://www.coursera.org/account/accomplishments/verify/HFULNMUB4QPM)

Personal Machine Learning Projects:

CNN based Image Captcha Recognition (link)

- Developed a CNN model for Image Captcha recognition that can be deployed on RaspberryPi to test the deep CNN model scalability on lower end devices
- Effectively used the neural network "tricks", including initialization, L2 and dropout regularization, Batch normalization, gradient checking in TensorFlow
- Implemented and applied a variety of optimization algorithms, such as mini-batch gradient descent, Momentum, RMSProp and Adam and checked their convergence

Fashion Recommendation System using PyTorch (link)

- Built a content based fashion recommendation system with a data size of about 280K fashion images across 46 categories
- Conducted Transfer Learning from ResNet50
- Used Fastai hooks to retrieve image embeddings and Approximate Nearest Neighbors, embeddings centroid detection to obtain most similar images as recommendations

Predicting Employability based on LinkedIn Profile Summary (link)

- Created an employability prediction system using a LinkedIn corpus consisting of close to 60k user profiles to find out the correlation between the profile summary and their corresponding job roles
- Extracted close to 90 linguistic features from text related to Lexical readability, richness, sophistication, variation, POS tagging and word-count based features
- Performed statistical analysis using point biserial correlation coefficients to measure the relationship between the continuous feature variables and employability
- Evaluated the performance of different classification models

Neural Machine Translation System (link)

- Implemented a naïve machine translation algorithm to translate English words to French using word embeddings and vector space models
- Used Cosine similarity metric to calculate the semantic similarity between word vectors of both languages in the vector space and k-NN to get the embedding closest to a word in the given language to find its translated word vector

ML Algorithm Implementation from Scratch (link)

- Developed all the fundamental machine learning algorithms from scratch without using any pre-built machine learning libraries such as scikit learn
- Attempted to understand the inner workings of the traditional machine learning algorithms and their ways of optimization

Stock Price Prediction using GRU (link)

- Developed a multivariate GRU model for stock price prediction using Python and Keras
- Implemented dropout regularization and used Adam optimizer

Other Works:

- GitHub: https://github.com/ManvithaKola/
- Medium: kolamanvitha.medium.com
- Profile: https://manvithakola.github.io/
- Tableau: https://public.tableau.com/profile/manvitha8002