

Rashmika Reddy Vookanti

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EDUCATION

University of Washington, Seattle

Sept 2022 – Mar 2024

Master of Science in Data Science, GPA: 3.9/4

Courses – Machine Learning, Deep Learning, Statistics, Data Visualization, Applied Statistics and Experimental Design, Explainable AI, Machine Learning Systems

VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad

June 2015 – May 2019

B. Tech in Computer Science and Engineering, GPA: 3.87/4

Courses - Big Data Analytics, Predictive Analytics, Artificial Intelligence & Neural Networks.

PROFESSIONAL EXPERIENCE

Microsoft India

Hyderabad, India

Software Engineer

Aug 2019 -Aug 2022

- Processed, filtered telemetry data of Azure Supply Chain using spark, and developed a Machine Learning-based imputation for addressing the telemetry file unavailability issues using time series forecasting, which improved the accuracy by **~20%**.
- Developed an automated Data Quality monitoring solution, saving **~40 hours** of manual work per month and helping improve forecasting metrics of Azure VMs. Enhanced it by adding a reporting layer aiding leaders in identifying telemetry issues.
- Developed an advanced analytics solution for a US-based healthcare provider, forecasting the number of COVID-19 cases with **12%** MAPE using ARIMA and exponential smoothing. Further, a power bi report to track insights on hospital inventory availability.
- Created a web application to manage staffing needs and optimize project assignments. Implemented a hybrid recommendation system that leverages both content-based and collaborative filtering techniques to suggest projects to employees based on their skills and interests.
- Created a custom Data Quality Framework using a SQL rule engine for a machine manufacturer, resulting in an **18%** increase in reliability of machine failure predictions.
- Created a centralized data integration platform for a pharmaceutical manufacturer's supply chain. It seamlessly ingests data from 4 different sources, transforms it using Spark, and delivers it to the supply chain team in near **real-time** for crucial decision-making.

ACADEMIC PROJECTS

- Implemented Named Entity Recognition of eBay's listings as part of its Machine Learning competition. Computed and contrasted models built using Bi-directional LSTM, BERT to tag Brand, product type, model etc. Evaluated performance of both the models and BERT achieved an F1 score of **86%**.
- Conducted a comparative analysis of network pruning and LLM-int8 quantization techniques on a pre-trained RoBERTa Language Model for sentiment analysis classification task, we achieved a significant reduction in inference time of **4x**.
- Worked on Quora Question similarity, converted the text into a vector using TF-IDF, word2vec, on which classification algorithms, Logistic Regression, and Support vector machine are applied, achieving **50%** less log-loss over baseline model Random Forest.
- Successfully replicated the outcomes of the **SimCLR** and **MoCo-V2** self-supervised algorithms on Fast.AI datasets for image classification, as presented in the corresponding research papers.
- Conducted an experimental study using statistical tests and logistic regression techniques to analyze the correlation between social media usage and mental health problems.
- Implemented a Convolutional Neural Network (CNN) for detecting steering angles, using input images and corresponding steering angles as output, with the aim of improving autonomous driving systems.

SKILLS

Programming	:	C++, C#, R, Python(Numpy, pandas, Scikit-Learn(sklearn)), PySpark, PyTorch, TensorFlow
Databases	:	SQL DB, SQL Data Warehouse, Spark, Databricks, Hadoop, Extract Transform Load (ETL, ELT)
Azure (Microsoft Cloud)	:	Azure Machine Learning, Synapse, Data Factory, Data Lake Storage, Azure Analysis Service
Data Science / ML	:	Regression, Classification, Time Series Analysis, Recommendation Systems, Natural Language processing, Convolutional Neural networks, Statistics, Experimental design, Hypothesis testing, Data Science pipeline (cleansing, wrangling, visualization, model). Data Visualization(Power Bi, Tableau)

PROFESSIONAL TRAINING

- Certified in Designing and Implementing an Azure AI Solution (AI-100)
- Certified in Data Engineering on Microsoft Azure (DP -203)
- Certified in Microsoft Azure Fundamentals (AZ-900)