Monu Singh

Data Scientist

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WORK EXPERIENCE

Standard Chartered Bank Global Business Service , Bangalore, India   **12/2020 – Present**

Building machine learning and analytics solution for corporate banking clients; Award - Digital North Star

Data Scientist - Machine Learning Engineer

- *Machine Learning Solution* - Developed and deployed an entity resolution Machine Learning app that identified bank customer counterparties with 95% accuracy; Likely sales conversion by 20%;
- Optimized natural language processing algorithms with scikit-learn cosine similarity, scikit-learn TF-IDF vectorizer, tokenizers and custom regex function; reduced unclean names by 40% for the search algorithm
- *Data Science and Analytics* - Engineered data analytics pipeline with PySpark, and Python to report digital penetration of client and report 10+ KPI on dashboard; Insights drives opportunity leads for 100+ clients
- *Data Engineering* - Optimized data pipeline with PySpark, Python and Shell to reduce processing time by 60% for reporting KPI to dashboard and improve data validation by 40%

HSBC Global Analytics Center, Bangalore, India   **07/2019 – 11/2020**

Developing data science solution for commercial banking clients; Awards - Star Performer and Trailblazer

Data Scientist - Marketing Analytics

- *Natural Language Processing (NLP)* - Built a natural language processing application using fuzzywuzzy algorithm to identify and group 10,000+ client's counterparty name; Generated 200+ leads for cross-sell
- *Machine Learning Solution* - Implemented machine learning algorithms K-Means and KNN on counterparty group to cluster them in three opportunity baskets; Increased sales by 15% through marketing campaign
- *Analytics Engineering* - Engineered an analytics application containing 100+ unbanked supplier groups and their portfolio information; Reduced manual processing time by 70%; Identified 20+ high-value suppliers for marketing promotion, and increasing supplier penetration in select markets by 20%

Accenture Solutions Private Limited, India Application Development Analyst   **09/2014 – 05/2017**

PORTFOLIO AND RESEARCH PROJECTS

- *Deep Learning Application* - Designed, and build a lightweight Keyword spotting deep learning model (CNN, LSTM, DNN) and deployed a streamlit web-application on AWS using CloudFront stack, AWS Lambda; Feature engineering and extraction from audio data to train model, to achieve accuracy of 95%
- *Machine learning Solution* - To predict client's propensity to subscribe; Likely increase in conversion chances by 20%; Constructed a scalable data preparation pipeline and integrated with PySpark MLib library to train and deploy Gradient Boosted Trees Classifier model; Resulted in overall accuracy of 88%
- *Deep Learning Application* - Implemented Huggingface pipeline and pre-trained T5-small model to perform translation tasks; Achieving accuracy of 90%; Built FastAPI application that integrated pre-trained model

EDUCATION

Master of Business Administration (MBA), **Indian Institute of Technology, Kanpur, India**   **06/2017 – 05/2019**

SKILLS AND TOOLS

- **Data Science and Machine Learning -** Python (Programming language), PySpark, SQL, Dataiku; Algorithms Linear Regression, Logistic Regression, KNN, K-Mean, DTs, Gradient Boosted Trees; XGBoost; A/B Testing
- **Deep Learning -** Framework - PyTorch; DNN, CNN, RNN; NLP - word2vec, Tokenizers, Attention Mechanism
- **Machine Learning Operations** - MLFlow, Docker, FastAPI, Github Actions, Cloud - AWS

CERTIFICATIONS

AWS Certified Cloud Practitioner ; AWS Certified Solutions Architect - Associate ; Microsoft Azure AI Fundamentals