



# Monu Singh

Data Scientist - Machine Learning Solutions

A data scientist with over 5 years experience in implementing different machine learning frameworks and having a solid understanding of machine learning algorithm; Hands-on experience in building, and deploying data science applications with proven business outcomes

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## WORK EXPERIENCE

### Data Scientist

Standard Chartered Bank

12/2020 - Present

Bangalore, India

Building machine learning solutions for corporate banking clients; Awarded - Digital North Star

#### Achievements/Tasks

- Developed and deployed a NLP application using cosine similarity, scikit-learn TF-IDF vectorizer, tokenizers and custom regex function that identified bank customer counterparties with 95% accuracy; Likely sales conversion by 20%.
- Built a XGBoost, and Logistic Regression classifier using Sickit-learn, and Dataiku in order to predict customer probability in using digital platform; Resulting in 20% improvement in nudging clients through mail campaign to use digital platform.
- Engineered data analytics pipeline with PySpark, and Python to report digital penetration of client and report 10+ KPI on Tableau; Drives leads for 100+ clients.
- Built data pipeline with PySpark, Python and Shell to reduce processing time by 60% for reporting KPI to dashboard and improve data validation by 40%.
- Architected Docker images with Dockerfile and Docker compose to provide seamless deployment and scalable infrastructure; saved 10 hours per week.

### Data Scientist

HSBC Global Analytics Center

07/2019 - 11/2020

Bangalore, India

Developing data science solution for commercial banking clients; Awarded - Star Performer

#### Achievements/Tasks

- Built a nlp application using fuzzywuzzy algorithm to identify and group 10,000+ client's counterparty names; Generated 200+ leads for cross-sell campaign.
- Implemented machine learning algorithms K-Means and KNN on counterparty groups to cluster them in opportunity baskets; Increased sales by 15% .
- Engineered an analytics application containing 100+ unbanked supplier groups and their portfolio information; Reduced manual processing time by 70%;

## PERSONAL PROJECTS

Deep learning application for lightweight custom wakeword

(04/2023 - Present) [🔗](#)

- Designed, and build a lightweight Keyword spotting deep learning model by implementing CNN, LSTM, DNN using Keras API for tensorflow.
- Features engineering of audio (MFCC, and spectrogram) to train-tune the CNN model, and Deep Neural Network model to achieve low False Reject Rate, and a test accuracy of 97%.
- Deployed a streamlit web-application on AWS using CloudFront stack, AWS Lambda.

Machine learning application for customer subscription behaviour

(02/2023 - Present)

- Built a binary classifier using PySpark MLib, XGBoost, and Gradient Boosted Trees to predict client's propensity to subscribe to bank's term deposit based on data from cold calls, likely increase in conversion by 20%.

## SKILLS

Programming - Python, PySpark



Machine Learning - Linear Regression, Logistic Regression, KNN, K-Mean, PCA, Decision Trees, Gradient Boosted Trees, Random Forest, XGBoost, A/B Testing



Deep Learning (PyTorch), MLPs, DNN, CNN, RNN; NLP - Tokenizers, Embeddings, Attention Mechanism



MLOps - MLFlow, Docker, FastAPI, Github Actions, AWS, Airflow



Big Data and Distributed System - Spark, Hive, Hadoop, SQL



## CERTIFICATES

AWS Certified Solutions Architect Associate (09/2023 - 09/2026) [🔗](#)

AWS Certified Cloud Practitioner (03/2023 - 03/2026) [🔗](#)

Microsoft Azure AI Fundamentals (10/2023 - Present) [🔗](#)

## EDUCATION

**Master of Business Administration (MBA)**

Indian Institute of Technology, Kanpur

06/2017 - 05/2019