

Mushrifah Hasan

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SUMMARY

Motivated and detail-oriented data scientist with around 2 years of experience in machine learning, predictive & data analytics. Enthusiastic about Deep Learning, collaborative, positive attitude and always exploring and learning.

PROFESSIONAL EXPERIENCE

General Mills | *Mumbai, India*

Nov 2023 - Present

Analyst - Data Science

- Optimizing and automating ML model for elasticity using **GCP, Python, and Airflow**, reducing process time by 90% and also scaling to additional markets with minimal manual effort.
- Delivering ad-hoc decision analytics and actionable insights tailored to stakeholder's needs, along with gaining familiarity with the FMCG and Strategic revenue management (SRM) terms for more comprehensive analysis.

Mobicule Technologies Pvt. Ltd | *Mumbai, India*

Sept 2021 - Nov 2023

Data Scientist

Oct 2022 - Nov 2023

- Improved the collection efficiency and recovery of assets by identifying patterns in payment behavior and predicting which customers are most likely to default using **classification and clustering-based machine learning algorithms**.
- POC for automated campaign rules creation for effective collection strategy by personalized communication with customers at the most optimal time and mode of communication using classification and rule-based algorithms.
- Reduced operational costs and captured key information regarding collections status by developing a debt collection bot using **Rasa, Python, Text to Speech, and Speech to Text**.
- Increased the response time and interaction with the user by developing a POC chatbot to provide answers to aggregate-based queries based on a private database (i.e. text to SQL) using **openai API, Python, and Rasa**.
- Developed end-to-end data pipeline for analytics dashboard with **Python, Airflow, and Superset**, resulting in reducing dashboard downtime and increasing stakeholder engagement.
- Collaborated with cross-functional departments to integrate ideas into products and develop AI-based solutions for the **mCollect debt collection platform**.

Machine Learning Intern

Sept 2021 - Sept 2022

- Conducted **Descriptive Statistics, Exploratory Analysis, and Data pre-processing** as well as implemented Machine learning algorithms to derive insights.
- Applied **data modeling and predictive analytics** in BFSI, and Telecom Industries, and worked with large complex datasets along with classification and clustering-based machine learning algorithms.
- Automated identifying and allocating realistic, achievable targets based on profile and demographic conditions by analyzing historical and predicted data along with a rule-based strategy.

TECHNICAL SKILLS

- **Languages/Tools:** Python, SQL, Google Cloud, Apache Superset, Docker, Git, Tableau, Grafana, Pyspark, R
- **Libraries/Frameworks:** Flask, Rasa, Pandas, NumPy, Matplotlib, Scikit-Learn, MLflow, Kubeflow, Airflow, FastApi, Streamlit, TensorFlow, Spacy, BeautifulSoup, PyTorch, FastAI

PROJECTS




Depression Detection Based on Sentiment Analysis in Social Media Using Deep Learning

- Implemented a two-step depression detection system with data scrapped from Twitter using deep learning language modeling in **Tensorflow**, and deployed the model as a **web application** with **Flask**.

Stress Detection in Tomato Plants with thermal images using Deep Learning

- Implemented a non-invasive multi-modal analysis technique for stress detection in tomato plants with thermal images, trained a CNN-based image classification model using **Pytorch**, and deployed it using **Flask**.

PUBLICATIONS

- Data-driven Depression Detection System for Textual Data on Twitter using Deep Learning, IEEE, 2022 
- Application of Deep Learning Coupled with Thermal Imaging in Detecting Water Stress in Plants, Book: Design of Intelligent Applications using Machine Learning and Deep Learning Techniques, 2021 
- Image Processing based Application of Thermal Imaging for Monitoring Stress Detection in Tomato Plants, IEEE, 2019 

EDUCATION

Sardar Patel Institute of Technology, Mumbai

Dec 2020 - Sept 2022

MTech, Computer Engineering (CGPA: 9.85/10)

Computer Vision Nanodegree, Udacity 

Oct 2019 - Feb 2020

University of Mumbai, Mumbai

Jul 2016 - Nov 2020

B.Tech, Computer Engineering (CGPA: 8.12/10)