

# Mushrifah Hasan

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[Linkedin](#) | [Website](#)

## 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 international markets with minimal manual effort.
- Delivering adhoc decision analytics and actionable insights tailored to stakeholders 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**

- Improving 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**.
- Automating 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.
- Reducing operational costs and capturing key information regarding collections status by developing a debt collection bot using **Rasa, Python, Text to Speech and Speech to Text**.
- Increasing the response time and interaction with the user by developing a POC chatbot to provide answers to aggregate-based queries based on the private database (i.e. text to SQL) using **openai API, Python, and Rasa**.
- Developing 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**

- Conduct **Descriptive Statistics, Exploratory Analysis, and Data pre-processing** as well as implement Machine learning algorithms to derive insights.
- Apply **data modeling and predictive analytics** in BFSI, Telecom Industries, and working with large complex datasets along with classification and clustering-based machine learning algorithms.
- Automating 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, Keras, TensorFlow, Spacy, BeautifulSoup, PyTorch, FastAI, hugging face libraries

## PROJECTS




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

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

### **Stress Detection in Tomato Plants with thermal images using Deep Learning**

- Implements a non-invasive technique multi- modal analysis for stress detection in tomato plants with thermal images and 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)*