

# Mohammad Najeed Osmani

## Data Scientist

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<https://www.kaggle.com/najeedosmani>

### CAREER SUMMARY AND ACHIEVEMENTS

- Seasoned **Data Scientist** with **3+ years of experience** in delivering impactful solutions in **Telecommunications, Oil and Gas, Fashion, and Retail domains**.
- Proficient in **Classical ML, Gen AI(NLP), and MLOPs** leveraging **Classical ML algorithms and RAG** systems to create robust cloud-based solutions.
- Kaggle Expert** and **Bronze medalist** in the "**GoDaddy - Microbusiness Density Forecastin** [g](#)."
- Runner-up (Rank 2)** in an ML Hackathon on **MachineHack** [g](#) . **Best Global rank - 42.**
- Ranked 10th (Top 2%)** in **Analytics Vidhya's "JOB-A-THON,"** [g](#)

### SKILLS

#### Core Skills

Generative AI, Business Intelligence, Machine Learning, Deep Learning, Computer Vision, Large Language Models(LLMs), MLOPs.

#### Technical Skills

Python, Langchain, LLMs (Llama2, Gemini, GPT 3.5 Turbo, GPT-4, Mistral), Keras, Pytorch, HuggingFace, Scikit-learn, SQL, Spark, Faiss, Redis, Pinecone, Streamlit, Gradio, Flask, Fast API, Azure - MLOPs, Docker, Databricks, Azure SQL Server, Teradata, NoSQL Databases, GitHub.

### PROFESSIONAL EXPERIENCE

#### Data scientist ASL - Gen AI

Nov 2023 – present | Hyderabad, India

Brane Enterprises [g](#)

##### RAG with Logical Chunking:

- We developed a **Logical Chunking tool** for **document parsing, enhancing context preservation** in any document by utilizing a **custom-trained Detectron 2** model.
- Utilizes **Pinecone** as a vector database and **BGE-Large** as an embedding model to embed the chunks. The Mixtral 8 X 7b model is employed as the backbone LLM to answer user queries.

##### Crop Land Segmentation - Satellite Imagery:

- We have developed a **crop segmentation** model for a **government entity** to **monitor crop health, area, and type using Sentinel 2 and Landsat images**.
- Employed the state-of-the-art image segmentation model **SAM (Segment Anything Model)** with custom loss functions, including a weighted combination of **Binary Cross-Entropy (BCE) loss and Dice loss**, and evaluation metrics such as IOU.

#### Data Scientist

Sep 2021 – Nov 2023 | Jaipur, India

Celebal Technologies [g](#)

##### Allocated Water-Oil-Rate Prediction:

- Engineered a **regression model** aimed at accurately predicting the **Allocated Water-Oil Ratio**, aiding field engineers in daily decision-making **processes to optimize oil extraction quality**.
- Orchestrated the **batch deployment of the model** through **Azure ML Studio** and **Azure Data Factory**, ensuring seamless integration into the production environment.

##### Product Recommender system:

- Developed a **Recommender system** for a **fashion and retail sub-brand, serving over 13+ lakh customers**, leveraging purchase data and other features for personalized product recommendations.
- Established a **Data Ingestion pipeline with SQL queries to aggregate customer, product, and sales data for model training**.
- Deployed on a **Databricks Spark cluster for scalable recommendation processing by utilizing Azure Data Factory as an orchestration platform**.

##### Networking KPI Assistant:

- Developed an end-to-end chatbot using **GPT-3.5 Turbo**, interpreting **natural language queries** and translating the queries into **SQL** to extract information.
- Deployed** the chatbot on the cloud, enabling the **CEO to access and visualize KPIs** and facilitating data-driven decision-making.

### EDUCATION

#### Bachelors of Technology (B.Tech.) ME

2017 – 2021

Jawaharlal Nehru Technological university (JNTUHCEJ)

### CERTIFICATIONS

#### Databricks Certified Machine Learning Professional [g](#)

Advanced machine learning tasks using Databricks Machine Learning.

#### Academy Accreditation - Databricks Lakehouse Fundamentals [g](#)

Understanding of fundamental concepts related to Databricks Lakehouse Platform.

#### AZ-900 Azure Fundamentals Certification

Demonstrate foundational knowledge of cloud concepts in general and Microsoft Azure in particular.