# Ahmad Rafi

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## Technical Skills

Skills: Python, SQL, PySpark, NLP, Machine Learning

Visualization Tools: Tableau, Power BI

Other Skills: Data Analysis, Data Mining, Model Deployment, API Development, AWS, JIRA

# Experience

## Centre for Integrative Omics Data Science (CIODS)

February 2023 - October 2024

Data Scientist

Mangalore, Karnataka

- Created an XGBoost model to predict Type 2 Diabetes using metabolite profiles, enhancing accuracy by 27% over baseline models through rigorous data cleaning, feature engineering, and iterative model training.
- Designed and built scalable data pipelines for head and neck cancer research, leveraging NLP techniques to analyze
  extensive datasets and construct a specialized database, resulting in a 40% reduction in data processing time through
  advanced data engineering and optimization strategies.
- Partnered with cross-functional teams to integrate machine learning models into data-driven decision-making processes, achieving a 50% reduction in processing time and boosting research efficiency through advanced analytics and algorithm optimization.
- $\bullet$  Engineered and refined an NLP-based chatbot for interactive communication, applying vectorization techniques and semantic analysis to boost user engagement by 25% through enhanced natural language understanding and machine learning methods.

## Knowledge Solutions India (Affiliation with Microsoft)

February 2021 - April 2021

Machine Learning Intern

Remote

- Developed and optimized an insurance cost prediction model using various machine learning algorithms, achieving a 15% improvement in prediction accuracy compared to legacy models through advanced model tuning and hyperparameter optimization.
- Conducted thorough accuracy assessments and model validation, utilizing cross-validation and performance metrics (such as accuracy, F1-score, precision, and recall), improving the model's accuracy by 10-15%, contributing to a noticeable increase in stakeholder confidence and supporting more reliable decision-making for business operations.
- Acquired comprehensive expertise in machine learning techniques, including model selection, training, and evaluation, enhancing overall project efficiency and effectiveness.

#### Education

#### Visvesvaraya Technological University

July 2019 - August 2023

Bachelor of Engineering in Computer Science - 8.53 CGPA

Moodbidri, Karnataka

## **Projects**

#### Data Exploration in SQL | SQL Server

• Conducted data exploration of the COVID-19 dataset in SQL Server to identify trends, patterns, and insights.

#### Diabetes Analysis and Suggestions | Tableau

• Performed a comprehensive analysis of diabetes data using Tableau, uncovering patterns and trends.

#### Email Spam Classifier | Python, Naive Bayes, Flask, Render

- Developed an email spam classifier using a Naive Bayes model to filter spam emails.
- Trained the model on extensive data and deployed it with Flask and Render to streamline email management.

## Rossmann Sales Forecasting | Python, Machine Learning

- Enhanced forecasting accuracy by incorporating time series features and external data sources, leading to a 15% increase in forecast precision and greater reliability in business decision-making.
- Applied various techniques to fine-tune the model, addressing challenges and improving prediction performance.

#### Mushroom Classifier | Python, RandomForest, XGBoost

Achieved 98.439% accuracy in poisonous mushroom classification using Ensemble RandomForest and XGBoost.

#### **Publications**

- Tyr352 as a predominant Phosphosite in the understudied Kinase and Molecular Target, HIPK1: Implications for Cancer Therapy Link
- OBLIVIOUS: The Unseen Guide Link