I IRFAN AHMED
Machine Learning Engineer

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ABOUT ME

As a Machine Learning and Data Scientist Engineer, I specialize in developing intelligent systems and leveraging data to drive innovative solutions. With expertise in Python, machine learning algorithms, data engineering, and natural language processing, I'm focused on enhancing data-driven decision-making and advancing real-world applications. I aim to contribute to forward-thinking organizations while continuously growing and delivering impactful results.

INTERNSHIPS

May 2024- July 2024

Machine Learning & Data Science Engineer
Data Planet Technologies Private Ltd, On-site
- Integrated NLP with SQL databases to improve user interaction.
- Designed a web app to convert SQL queries from natural language..
- Enabled data display and visualization for better insights.
- Applied machine learning and data engineering to optimize architecture.
- Used DuckDB to enhance PostgreSQL connectivity and system efficiency.

Aug2023- Oct 2023

Chatbot Development
Modern Agriculture Technology & Innovation Corporation
- Developed a web application featuring a generative AI-powered chatbot with text and speech support.
- Designed the chatbot to provide solutions and conduct problem analysis for queries related to mango trees and farms.
- Integrated a YOLO-based machine learning model for detecting leaf diseases.
- Enhanced the application's capability to support agricultural diagnostics and management.

EDUCATION

Expected Graduation- Aug 2026

Bachelor of Technology: Artificial Intelligence and Data Science
Shiv Nadar University Chennai
CGPA (till 4rth semester): 8.43

2021- 2022

Higher Secondary
SBOA School & Junior College, Anna Nagar
Percentage: 91.6%

2019-2020

Senior Secondary
SBOA School & Junior College, Anna Nagar
Percentage: 90.40%

CERTIFICATIONS

- Data Analysis with Pandas & Python
- Tableau Training For Data Science
- Exploratory Data Analysis
- Generative Adversarial Network (GANs)
- Complete Machine Learning & Data Science Bootcamp (Udemy)
- Object Oriented Programming in Java & Python
- Web Development with React & FastAPI

HACKATHONS & COMPETITIONS

Solvathon 2024
Top 10 finalist at THIT 2024 for developing a medical assistance website with integrated data and a chatbot for professionals and researchers.

Pragyan 2023
Secured 3rd Place in Autonomous Drone racing

ideas to Impact 2024
Top 20 finalist All Over India For Developing an Solar Powered Autonomous Beach Cleaning Rover

PROJECTS

Zen - The AI Database Manager
Created a AI Chatbot integrated DuckDB with PostgreSQL to create a conversational data retrieval system using GPT-3.5 Turbo for NLP, enabling real-time SQL querying and data visualization without local storage.

Enhanced Machine Learning Model for Efficient Human and Animal Detection
Improved a machine learning model for human and animal detection by incorporating a Histogram of Oriented Gradients (HOG) descriptor, achieving enhanced accuracy with minimal computational resources.

Integrated Health Accessible System
The platform features a dynamic UI with generative AI for multilingual chat, voice assistance, and comprehensive medical resources, including disease info, treatment guidelines, nearby health centers, and government schemes.

Agricultural Centric Database Management System
Designed and implemented a SQL-based DBMS for agricultural supply chain management, optimizing crop production, distribution, and market analysis.

RESEARCH PAPER

Human Face Sketch to Real Human Face Generation
Researched style-controlled face generation. Leveraged Stable Diffusion XL and T2I adapters for precise image manipulation.

SKILLS

Programming Languages:
- *Python*
- *Node.js*
- *Embedded C/C++*
- *Java*
- *HTML/CSS*

Database Management:
- *SQL (MySQL Workbench)*
- *PostgreSQL*
- *DuckDb*
- *Tomato*

Machine Learning:
- *Libraries: Scikit-Learn, Pandas, NumPy, Matplotlib, Pytorch, Keras, Ultralytics*
- *Predictive Modelling: Regression, Classification, Clustering, Regularization, Model Selection, Augmentation*

Analytical Skills:
- *Statistical Analysis: (Descriptive and Inferential Statistics) Hypothesis Testing, Regression Analysis*

Tools:
- *Google Colab*
- *Microsoft Excel*
- *Jupyter notebook*
- *PGAdmin*
- *VS code*
- *Sublime Text*

OPERATING SYSTEM PROFICIENCY
- Windows ★★★★★
- LinuxOS ★★★★

Soft Skills:
- *Critical thinking*
- *Team Leading & Coordination*
- *Communication Skills*
- *Problem Solving*
- *Self-Motivation*

TRAINING
- Artificial Intelligence & Data Science (IITM)
- Metaverse and Digital Twins (BRILLO ,NITT)

LANGUAGES KNOWN
- English ★★★★★
- Tamil ★★★★★
- Hindi ★★★★☆
- Urdu ★★★★☆
- Arabic ★★★☆☆
- German ★★★★☆