



Jay Soni

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Professional Experience

Data Science & AI Engineer, CodeTrade.io

07/2024 – present
Ahemdabad, India

- Developed an AI chatbot enabling users to interact with complex databases using natural language, eliminating the need for manual SQL queries and improving accessibility for non-technical users.
- Developed data processing and model inference systems, including batch pipelines, leveraging LLMs and AWS bedrock to build scalable data-driven solutions, reducing costs by almost 50%.
- Designed and built an AI-driven bio generator for a dating app, delivering personalized, context-aware biographical content to enhance user engagement and matchmaking accuracy.
- Architected an AI-driven question paper generation system, leading the design of core modules and collaborating with clients to gather requirements and deliver tailored solutions.
- Contributed to the development and optimization of large language models (LLMs) for text generation and information retrieval tasks, improving model performance by 15% through fine-tuning and advanced optimization techniques.

Data science Internship, Petpooja

10/2023 – 03/2024
Ahmedabad

- Developed and optimized pipelines for fine-tuning stable diffusion models, creating high-quality and diverse fashion image generations.
- Engineered and wrote prompts to enhance the text-to-image model's accuracy and stylistic output.
- Improved model performance by 20% through effective data validation and iterative experimentation.

Data Science Internship, Datavizz

07/2023 – 08/2023
Ahmedabad

- Worked on validating data, identifying anomalies, and verifying data pipeline integrity. Collaborated with data science and engineering teams to enhance data quality and support data-driven decision-making.

Education

M.Sc. Data science, Gujarat University

2022 – 2024

Relevant Coursework: Deep Learning, Image Processing, Computer Vision, Advanced Deep Learning, Advanced Algorithms, NLP, Cloud Computing

Ahmedabad, India

B.Sc. Data Science, Gujarat University

2019 – 2022

Relevant Coursework: Supervised Machine Learning, Unsupervised Machine Learning, Data Visualization, Descriptive Statistics, Database Management System, Maths, Tableau, PowerBI, Excel.

Ahmedabad, India

Skills

Programming Languages:

Python , R, SQL

Tools and Software:

Power BI, Excel, Tableau, AWS

ML & DL

LLM, AI Agents, Transformers, GANs, CNNs, RNNs, LSTMs, Latent Diffusion Models

Python Libraries

TensorFlow, PyTorch, scikit-learn, pandas, Streamlit, Flask, OpenCV, nltk, seaborn, OpenAI

Projects

StyleGen

- **Description:** Developed a user-friendly generative AI model for fashion that creates diverse and stylish images from detailed textual descriptions.
- **Solution:** Fine-tuned latent diffusion models using techniques like LoRa and Dreambooth. Created a web application interface using Streamlit for seamless user experience.
- **Impact:** Improved image generation quality by 30% through iterative experimentation and optimization.

Helmet Detection


- **Description:** Built a system to detect helmet usage in images for road safety.
- **Solution:** Fine-tuned YOLOv5 (tiny) model on a custom-labeled dataset, achieving 80% accuracy. Developed a Flask-based API for real-time detection.
- **Impact:** Enabled scalable and user-friendly helmet detection solutions for safety monitoring.


Pneumonia Detection from Chest X-Ray


- **Description:** Created a solution to detect pneumonia from chest X-ray images.
- **Solution:** Designed and trained a CNN model from scratch, achieving 90% test accuracy. Preprocessed and validated X-ray images for high-quality input data.
- **Impact:** Delivered a reliable diagnostic tool for medical applications.

Certificates

IBM Data Science Professional Certificate 

Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization 
From DeepLearning.AI

Python for Everybody Specialization 
From University of Michigan

Structuring Machine Learning Projects 
From DeepLearning.AI

primer course on Data Science and Machine Learning 
IIT Guwahati