Rushikesh Darge

Data Scientist

Over the past three years, I have actively engaged in diverse project endeavors spanning the entire data lifecycle, from meticulous data collection to seamless deployment. My expertise lies in harnessing the power of cutting-edge Deep Learning and Machine Learning models to solve complex business problems with precision and innovation.

Contacts

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Skills & Tools

Language:
Python, SQL Javascript, HTML
Data Analysis:
NumPy, Pandas, MySQL, NoSQL, Excel
Data Visualization: Matplotlib, Tableau, PowerBI, Redash
Machine Learning Algorithms:
Linear Regression, Logistic Regression, K-Means Clustering, KNN, Decision Tree, Random Forest, XGBoost,
Naive Bayes, Support Vector Machine.
Deep Learning: TensorFlow, Keras, PyTorch.
Deep Learning Architecture: ANN, CNN, LSTM, VGG16, EfficientNet, MobileNet, Yolo-V9, U-Net, Transformers, BERT, Large Language Models (LLM), Ollama
Version Control:
Git, GitHub, Bitbucket, DVC.
Image Annotation: Labellmg, Labelme
DevOps: CI/CD
Containerization (Docker)
Orchestration (Kubernetes)
Amazon Web Services (AWS)
Others: Django, Flask, ETL, OOPS, Predictive Modeling, Statistics, GenAi, Scrapy, Web scraping, prompt engineering

Education & Learning

Scaler.com
Specialization course on Machine Learning, Deep learning
July 2022

Bachelor's of Engineering
Information Technology at Mumbai University 7.03 CGPA
June 2021

Work Experience

Data Scientist - Claim Genius India Pvt Ltd.
Jan 2023 - Present

- Engineered a highly precise **Instance Segmentation** model using the cutting-edge **YOLOv9** architecture, achieving exceptional accuracy in detecting 50 **car body panels**.
- Devised an innovative **pipeline to automate car part curation**, leveraging the Segment Anything model (SAM) to significantly enhance speed and efficiency.
- Created a **Key Point Detection** Algorithm compliant with Automotive Recyclers Association (ARA) standards, enabling precise identification and assessment of damage to specific car body parts by detecting key points and analyzing structural integrity.
- **Optimized foundational** model architectures for improved performance and overall efficiency.
- Developed a **stacked classification** model for repair/replace decisions, surpassing the accuracy of existing deployed models by optimizing the decision-making process.
- Designed and implemented a robust **fraud detection rule engine** to proactively identify and prevent fraudulent insurance claims.

Data Scientist - InArtiGence.ai
Aug 2021 - Dec 2022 (1.5 Years)

- Implement and Deployed **research paper** of **Boundary Patch Refinement** for parts detection models, refining predictions made by instance segmentation to enhance accuracy and fine-tune the boundaries of detected objects.
- Designed an **Optical Character Recognition (OCR)** system for extracting information from driving licenses and RC books, streamlining data capture and enhancing document processing efficiency.
- **Fine-tuned the GPT model** to meet specific output requirements, contributing significantly to its initial deployment.
- Conducted extensive **curation of car parts and damage data**, ensuring data quality and accuracy in support of various machine learning and AI applications.

Personal Projects

Advance RAG Chatbot
Feb 2024 - Present

- Developed and Deploying a **Retrieval-Augmented Generation (RAG)** system, functioning as a chatbot, for the Vipsanna Research Institute (NGO).
- Integrated advanced retrieval techniques to fetch **relevant information** in not only **text** but **images** and **Videos** from a knowledge base on **user queries**.
- Implemented an innovative approach for seamlessly incorporating retrieved information into the **conversational context**.
- Utilized state-of-the-art **open source LLM generative models** to produce coherent and informative responses, enhancing user interaction and experience.