

Kushagra Pandya Machine Learning Engineer

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EXPERIENCE

Associate Software Engineer - AI, TSS Consultancy Pvt Ltd 01/2024 – Present | Rajkot, India

- Deployed a **Document Image Classification** system in production, handling **60,000-70,000 daily API hits** with **0.5-second** response time.
- Built an **Identity Document Extraction** system for KYC verification, processing **30,000 daily API hits** at **0.5-second** response time using Optical Character Recognition.
- Developed a **Deepfake Detection** POC, achieving **87% accuracy** for media authentication.
- Created a **Multilingual OCR** POC for 8 languages (Gujarati, Hindi, Tamil, Kannada, Punjabi, Bengali, English, Oriya) for document data extraction.

Research Intern, TSS Consultancy Pvt Ltd 11/2022 – 08/2023

- Conducted **Sentiment Analysis on Financial News** to support automated decision systems.
- Built **web scraping pipelines** to extract financial news from multiple dynamic sources.
- Developed **Named Entity Recognition (NER)** models for effective **information retrieval** from unstructured texts.
- Implemented a **Face Matching System** using **DeepFace** and **Siamese Networks** for identity verification tasks.
- Leveraged **Azure OpenAI API** to automate **information extraction from First Information Reports (FIRs)**.

SKILLS

Programming Languages: Python, SQL | **Technologies:** Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, LLMs, Multimodal AI, Reinforcement Learning, Optical Character Recognition, Time Series Analysis, Generative AI | **Frameworks & Libraries:** TensorFlow, PyTorch, OpenCV, NLTK, SpaCy, Hugging Face Transformers, Pandas, NumPy, Matplotlib, Seaborn, scikit-learn, Flask | **MLOps & Tools:** Git, GitHub, Docker, mlflow, DVC, Weights & Biases, Azure AI

EDUCATION

B.Tech, Computer Engineering in Specialization in Artificial Intelligence, Marwadi University 2020 – 2024 | Rajkot, India

Coursework :- Python, Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, Statistics, Probability.

PROJECTS

Stock Market Crash Prediction Web App ↗

- Developed a Flask-based web app for stock market predictions using **ARIMA**, **LSTM**, and **Linear Regression**, with integrated tweet sentiment analysis for buy/sell recommendations.

Sign Language to Spoken Language Translator ↗

- Created an app that translates sign language gestures into text and speech using **ResNet50**, **TensorFlow Lite**, and **OpenCV**, supporting 18 languages including 8 Indian languages.

PUBLICATIONS

Enhancing DNA Sequence Classification through Machine Learning: A Comparative Study on Human and Chimpanzee Genomic Data, Global AI Summit (2024) ↗ 08/2024

Barcode and QR Code Object Detection: An Experimental Study on YOLOv8 Models, (2024 International Conference on Emerging Innovations and Advanced Computing (INNOCOMP)) ↗ 05/2024