Lalit Patidar

■ lalitptdr5799@gmail.com

& 8224884457 • Noida in Linkedln (7) Github

PROFESSIONAL SUMMARY

Data Scientist with 1.5 year of experience in AI/ML technologies. Skilled in building accurate, datadriven solutions and eager to contribute in a collaborative, growth-oriented team.

PROFESSIONAL EXPERIENCE

03/2024 – present Noida,, U.P.

Data Scientist, Tyloones Software Pvt. Ltd

- Contributed to AI/ML projects focused on document classification and analysis, data deduplication, text detection and voice automation.
- Collaborated with teams to build scalable and efficient solutions. Used advanced techniques like RAG and agentic workflows for healthcare and document analysis, achieving up to 95% accuracy.

TECHNICAL SKILLS

- Programming Languages: Python, SQL
- Libraries & Frameworks: PyTorch, Scikit-Learn, NumPy, Pandas, Matplotlib, Seaborn, OpenCV, **Hugging Face Transformers**
- Databases: MySQL, PostgreSQL, Milvus • Deployment & Cloud: Docker, AWS, Azure

PROJECTS

LYFE-DOC-AI, AI/ML Engineer 🗆

Document Analysis and Query Engine

Developed Lyfe-Doc-AI, a RAG-based document analysis and query engine for healthcare, financial, personal, and general documents. Implemented OCR using Google Vision API to extract text, stored in Milvus vector database. Designed a query engine to process SQL and non-SQL text queries, generating relevant answers. Leveraged Open-Orca-Mixtral-7B and OpenAI models for input/output processing, ensuring accurate and context-aware responses.

Tech Stack:

- Models: Open-Orca-Mixtral-7B, OpenAI, SQLCoder
- Frameworks/Libraries: PyTorch, RAG, Google Vision API
- **Database:** Postgres, Milvus (vector database)
- Tools: Python, SQL, Fastapi, Docker, Celery (Task Queue)

BRM(Bank Data Deduplication), Data Scientist

Data deduplication using spark and splink

Designed and implemented a scalable bank data deduplication system to ensure clean and reliable datasets by identifying and eliminating duplicate records. Built a multi-step delta identification pipeline leveraging AWS Lambda to compare new input records against a master dataset.

- Developed an exact matching layer, followed by fuzzy matching using fuzzywuzzy for near-duplicate detection.
- Enhanced accuracy with a trained XGBoost model to detect complex duplicate patterns.
- For batch processing, optimized handling of CSV inputs:
- Trained, tuned, and deployed models on Amazon SageMaker, ensuring scalability and high performance.

Tech Stack:

Models: XGBoost

- Frameworks/Libraries: fuzzywuzzy, Jaro-wrinkler, Splink, Spark
- Tools: Python, AWS Lambda, Amazon SageMaker
- Other Skills: Exact & fuzzy matching algorithms, record linkage pipelines

Automated Road Defect's Detection, AI/ML engineer ☑

- Developed a road defect detection system using a object detection model YOLOv11 trained on the NRDD dataset to identify 10+ defect types such as potholes, longitudinal cracks, and alligator cracks.
- Designed a scalable pipeline for processing high-resolution dashcam videos frame-by-frame, outputting annotated videos, CSV logs, and visual summaries.
- Integrated a reporting engine that visualizes defect frequency, extracts top-defect frames, and applies confidence-thresholded statistics.

Tech Stack:

- Frameworks/Libraries: PyTorch, YOLOv11, OpenCV, Matplotlib, Pandas
- Models: YOLOv11 , NRDD (training dataset)
- Tools: Python, FFmpeg, CUDA (GPU acceleration), Threshold-based evaluation, annotated video rendering

DEEP-FAKE, AI/ML Engineer

Developed DeepFake, a face-swapping platform leveraging Roop and DeepFace for seamless face swapping on input videos and images. Integrated advanced features including super-resolution, denoising, and deblurring. Implemented video caption generation and automatic subtitle creation for input videos, enhancing accessibility and user experience.

Key Achievements:

- Created a robust face-swapping system for videos and images.
- Enhanced video quality with super-resolution, denoising, and deblurring.
- Automated video captioning and subtitle generation for accessibility.
- Optimized pipeline for efficient processing and high-quality outputs.

Tech Stack:

- Frameworks/Libraries: PyTorch, Roop, DeepFace, BasicSR, NAFNet
- Models: OpenAI (captioning), Whisper (voice-to-text)
- Tools: Python, OpenCV (image/video processing), FFmpeg (video handling)
- Others: Super-resolution, denoising, deblurring pipelines

Teli Voice Bot, AI/ML engineer

- Integrated VAPI (Voice AI) and GPT-4 for real-time call status updates, achieving 98% reliability.
- Reduced response latency by 35% through backend optimization (FastAPI + WebSocket).
- Developed robust error-handling protocols, ensuring uninterrupted service for 10,000+ calls.

Tech Stack: Python, GPT-4, FastAPI, WebSocket, Supabase, VAPI, Boost.Space ☑

EDUCATION

2021 - 2024 CGPA - 7.79 / 10	Master of Computer Application (MCA), Maulana Azad National Institute Of Technology (MANIT), Bhopal
2017 – 2020	Bachelor of Science (Computer Science),
Percentage - 68%	Christian Eminent College, Indore

ACHIEVEMENT

• Secured AIR - 505 in NIMCET examination out of 50,000+ participants.

LANGUAGES

English $\bullet \bullet \bullet \bullet \bullet$ Hindi $\bullet \bullet \bullet \bullet \bullet$