Muhammad Sheikh

8850878997/8850878840 | damianpatriot41@gmail.com | muhammad-sheikh-b721a4250 | muhd360

EDUCATION

VJTI	Mumbai, MH
B.Tech in ECE	*Dec. 2021 – May 2025*
PJSC,Dadar	Mumbai,MH
HSC	*May. 2019 – May. 2021*

TECHNICAL SKILLS

Languages:python, C/C++
Skills NLP,Pytorch,Tensorflow,AI,,Darknet, ONNX, TensorRT, OpenVINO, OpenCV
Developer Tools and extras: Git,Azure studio,DSA,Power BI,MS-SQL

EXPERIENCE

Data Analyst — Sep 2024 – Dec 2024
Freelance
- Using NLP developed a RAG system for analysing earnings call,performed sentiment analysis using Langchain,Groq,LLamaParse,Pinecone.
- Implemented trading strategies based on research papers and acheived 87% MAPE.
- Worked in a team to finetune llm's on financial documents to assign risk Score.Visualised price plots using lightweight charts.

Process automation intern — June. 2024 – Aug 2024
Matrix 3d Infocom Ltd.
- Developed predictive modelling to estimate renewal of subscriptions and increase efficiency by upto 90% of various departments by using python and msft power platform.
- Engineered and deployed a web scraper to get contact details.Also brought about automation in dynamics sale CRM reducing downtime upto 35%
- Based on the team feedback iteratively used the MSFT power platform to develop automation for HR team reducing process time by upto 90%.

PROJECTS

End to end supply chain management system | *Flask,Open-cv,LLM's*

- Developed an image preprocessing and post processing pipeline to classify and subsequently process objects.
- Extracted Date of Expiry and used QWEN-VL to classify objects based on category.Established an Azure db as well as an sqlite db to track inventory.Finetuned a GPT-3.5 model for detecting degree of freshness in produce.
- Used Anamoly-GPT and custom defect detection based on opencv to detect packaging defects.Deveoped a power-Bi dashboard connected with Azure lakeview to gain insights on data.

Rover obstacle detection | *Python, TensorFlow, Darknet, OpenCV, TensorRT, ONNX, OpenVINO*
- Developed a real-time object detection system using YOLOv5, optimized for Jetson Nano. Converted the trained model to ONNX and further optimized using TensorRT for high-speed inference. Integrated OpenCV for real-time video processing and tracking. Achieved 3x speedup on an Intel GPU using openvino for faster inferences.

Finance-Specific Text Summarization | *Python, PyTorch, TensorFlow, Hugging Face*
- Developed a transformer-based text summarization model fine-tuned on domain-specific financial and legal datasets for high-accuracy summaries.
- Implemented a hybrid extractive-abstractive summarization approach, combining BERT-based key sentence extraction with T5 for coherent summaries.
- Integrated the model into a real-time API service with caching mechanisms to handle large-scale document summarization efficiently.

Blind Assist Glasses | *: TensorFlow, Vosk, GPT-4 API, Gemini Speech-to-Text*
- Created low-cost smart glasses with advanced AI integration, featuring TensorFlow for real-time obstacle detection and Vosk for voice activation.
- Incorporated GPT-4 API for intelligent assistance and Gemini Speech-to-Text for natural language interaction
- Developed additional alternative configured using ESP'32 and using Azure Ai.

Employee Retention Prediction Model | *PL/SQL, Python, AutoML, EDA, Dashboard*
- Extracted, cleaned, and prepared employee data using PL/SQL and Python, resulting in a refined dataset for model training.
- Built an AutoML model to predict the likelihood of employee attrition, enhancing prediction accuracy and operational efficiency.
- Performed Exploratory Data Analysis (EDA) to identify key factors influencing turnover, generating actionable insights.
- Developed an interactive dashboard displaying predictive insights, enabling HR to proactively address retention challenges.
- Compiled a comprehensive report with visualizations and strategic recommendations to support HR decision-making.

VishwAdhar | *Flutter, Hardware Security Module (HSM), PKCS, OAEP, DeepFace*
- Developed a platform-agnostic (Android/iOS) Flutter app that encrypts blob data using PKI encryption within a hardware enclave for enhanced security.
- Implemented hardware-based key pair generation, ensuring the private key remains non-extractable and secure within the HSM.
- Designed a completely offline solution leveraging hardware to perform all encryption, adhering to key lifecycle management standards (expiry, revocation) without relying on backend components.
- Enabled UIDAI to use RSA PKCS or OAEP encryption protocols for data security and integrated facial recognition software using DeepFace, supporting up to 10 individual users.

Achievements

SIH WINNER 2023, 2024(Team lead),Top 50 TATA elxsi teliport
JEE-M 98.8 percentile with 99 percentile in maths
Selected for lateral entry in IIITH top 10 amongst 5000

Extra-curricular

Participated in the software team for mars rover achieving rank of 16 globally, VISHWA (2022-23)
Machine learning and marketing lead , GDSC (2023-24)

Certifications

1. AZ-102: Azure AI Engineer Associate(Ongoing)

2. OOPS C++-university of Virginia

3. IBM Professional AI engineering

4. Mathematics for Machine learning-University of illinois

5. Develop LLM based Prototypes-Udemy