

# DIVAX SHAH

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linkedin

Github

HuggingFace

Portfolio

## Experience

### Jr. Python Developer

May 2024 : Present

Thinkbiz Technology Private Limited

- Currently developing an advanced RAG chatbot system using LangChain Agents and OpenAI, capable of processing both structured (SQL) and unstructured (PDF, Excel, TXT) data sources, featuring role-based access control, real-time document ingestion, and automated source attribution for enhanced transparency and security.
- Developed an advanced OCR-LLM pipeline for Jugaad that upgraded document processing: improved invoice extraction accuracy from 15% to 85%, and receipt processing accuracy from 10% to 90% across multiple formats.

### AI and Synthetic Data Developer Intern

January 2024 : April 2024

DMI Finance Private Limited

- Developed a generative AI system for synthetic structured data generation, from concept to deployment. This involved creating a pipeline with Python and Gradio for data cleaning, deduplication, and embedding, enhancing data quality for generative models. Additionally, I designed a robust training framework using PyTorch and Hugging Face's Transformers, enabling fine-tuning Large Language Models (LLMs) with diverse datasets, significantly improving model accuracy and performance.
- Introduced a user-friendly Gradio interface to streamline synthetic structured data generation, facilitating easy data synthesis for users and enhancing customer interaction with the system. This interface significantly simplified the synthetic structured data generation process for users.

## Projects

### QuizWiz

June 2024 – August 2024

- Developed an AI-powered chatbot creation platform enabling users to create custom chatbots with unique knowledge bases in just one click.
- Integrated document processing features for training chatbots using PDFs and TXT files using llamaindex library.
- Built a web-based interface with multi-language support and analytics using Flask for web interface, llamaindex for RAG implementation, PostgreSQL for vector database, and Cloudinary for image database.

### Sanskrit-llama

June 2024 – September 2024

- Fine-tuned Meta's LLaMA-3-8B model on Sanskrit language datasets using QLoRA (Quantized Low-Rank Adaptation) for efficient training.
- Implemented advanced training techniques including gradient checkpointing, 4-bit quantization, and cosine learning rate scheduling using Axolotl framework.
- Deployed the model on Hugging Face Hub with comprehensive model cards, training metrics visualization, and interactive demo interface.

### Geolocation through Image Classification

June 2024 – September 2024

- Trained a deep learning model on a dataset of 10,500 images depicting 5 Indian cities.
- Implemented transfer learning using a VGG16 CNN model for accurate image classification.
- Deployed the model using Flask to provide a web interface for image-based geolocation.

## Skills

**Programming Languages:** Python, Java, C++

**Frameworks and Libraries:** TensorFlow, Keras, PyTorch, scikit-learn, Transformers, NumPy, Pandas, OpenCV, Flask, Streamlit, Tkinter

**AI Services and Integrations:** OpenAI, Google Gemini AI, Mistral AI

## Education

### Parul Institute of Engineering and Technology

CGPA: 8.2

B.Tech, Computer Science and Engineering

2024

### Gyanmanjari Secondary and Higher Secondary School, Bhavnagar

Percentage: 64%

GHSEB, Gujarat

2020