Satya Shah

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INTERNSHIPS:

-AI Task Analyst, Matrices, California, USA   *September 2025 – Present*

- Designed and executed _**50+ AI training tasks**_ for Gmail, Amazon, Slack workflows, directly improving data quality and advancing model development for **OpenAI** and **Anthropic**.
- Performed _**Quality Assurance on 100+ tasks**_, ensuring high-quality data generation and alignment with project requirements.
- Applied **prompt engineering** techniques and **JSON** structuring to build, test, and refine task instructions for accuracy and consistency.
- Identified and documented **bugs and edge cases**, contributing to improved task reliability and a **20%** reduction in rework cycles.

-Computer Vision Intern, Technostacks Infotech Private Limited, Ahmedabad, India [_link_]   *January 2023 – May 2023*

- Developed a web app for _**CT-scan-based kidney tumor detection**_ for a hospital using **transfer learning (VGG16** with **Tensorflow/Keras)**, achieving _**98% recall**_ and assisting doctors in the early diagnosis of kidney cancer for **500+ patients.**
- Built a complete ML pipeline from data ingestion to model evaluation using version control tools like **DVC**, **Dagshub**, and **MLFlow**.
- Preprocessed the images using Otsu's Binarization, Watershed segmentation, and Normalization. Handled class imbalance by **data augmentation**.
- Developed a user interface using **HTML, CSS, JavaScript, Flask** for routing, and **MongoDB for storing** patient records.
- Containerized the entire application using **Docker**. Deployed the app on **AWS using CI/CD with GitHub Actions, ECR,** and **EC2**.

PROJECTS:

-Data Talk: Query Without Code [_link_]   *July 2025*

- Enables users to connect their _**local**_ **Neo4j Graph DB, SQL, or SQLite** databases and query them using basic _**English sentences without writing any queries**_, reducing query-writing effort by _**80%.**_
- Uses **prompting techniques** for efficient query generation with **Langchain agents** for accurate responses.
- **Deployed** on **Streamlit**, offering a user-friendly **interface** for seamless database interactions.

-Chat summarizer by Fine-tuning [_link_]   *April 2025*

- Enhanced _**AI-driven chat summarization**_, transforming _**lengthy conversations into clear, concise insights**_.
- _**Fine-tuned**_ Google Pegasus (CNN/Daily Mail) on the **Samsum dataset**, optimizing for chat-based text summarization.
- Achieved high-quality performance and developed UI **using Flask, HTML, CSS, and JavaScript** for seamless user interaction.
- Exploring **quantization** techniques like _**LoRA**_ and _**QLoRA**_ for efficient model deployment.

-PEDIABOT AI For Pediatricians [_link_] [UTA'25 DATATHON WINNER]   *March 2025*

- Developed an AI-powered _**RAG**_-based chatbot for _**pediatricians**_, offering instant, context-aware medical insights to support clinical decisions with an _**average response time under 3 seconds**_.
- Integrated **Pinecone Vector Database, Hugging Face embeddings, and Groq's Mistral LLM**, enhancing retrieval accuracy and response quality.
- Containerized with the help of **Docker and deployed** the application on **Hugging Face Spaces** using **GitHub Actions (CI/CD)**, featuring a user-friendly interface with **HTML, CSS, and JavaScript**.

-AI Medical Image Analysis [_link_]   *January 2025*

- Developed a medical image analysis app for doctors, which helps in analyzing CT Scans, X-rays, Ultrasounds, etc
- Used **PubMed API and clinical trials** to fetch relevant research articles for the context of AI & **OpenAI API** for answer generation.
- Created functionality of heatmaps in the images with **OpenCV** for better visibility
- Created a wonderful UI using **Streamlit** with features like chat support with multiple doctors and an AI assistant.

TECHNICAL SKILLS:

Data Science/Machine Learning/ Deep Learning/ Computer Vision/NLP – Supervised Learning algorithms, Unsupervised Learning algorithms, statistics, Exploratory Data Analysis, ANN, CNN, RNN, Transformers
Programming languages - Python, SQL, HTML, CSS, JavaScript, TypeScript, React
Frameworks- Flask, Streamlit, Gradio, FastAPI, GitHub, Docker, Kubernetes, Langchain, LangGraph, Hugging Face, CrewAI, Autogen, Ollama
Databases- MySQL, MongoDB, Pinecone, Neo4j, FAISS, Chroma DB
Data Visualization- Tableau, Excel
Python packages and Libraries- Scikit-Learn, TensorFlow, Keras, PyTorch, NumPy, Pandas, SciPy, Seaborn, Matplotlib, OpenCV, Optuna

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EDUCATION:

-Masters of Science (MS), Computer Science,   *August 2023- May 2025*
University of Texas, Arlington, Texas, United States of America, GPA (3.9/4.0)

-Bachelor of Technology (BTech), Computer Science,   *August 2019- May 2023*
School of Engineering and Applied Science, Ahmedabad University, Gujarat, India

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-Soft Skills: Strong problem-solving skills, excellent written and verbal communication skills, adaptability, Teamwork, critical thinking, time management, and attention to detail
-Kaggle Competition [_link_]- Participated in a Kaggle competition on _**mushroom edibility prediction**_, leveraging machine learning for binary classification of **1 million rows**. Achieved a _**top 25%**_ **leaderboard ranking** among 2500 participants.