Vaidik Shah

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Education

California State University, Long Beach **May 2027**
Master of Science in Computer Science *Long Beach, CA, USA*
Key Courses: Artificial Intelligence, Computer Vision, Distributed Computing, Natural Language Processing

Gujarat Technological University **June 2024**
Bachelor of Science in Computer Science *Ahmedabad, India*
Key Courses: Object Oriented Programming, Data Structures, Relational Database, Computer Networks, System Design

Technical Skills

Programming Languages: Python, Java, JavaScript/TypeScript, C++, C#,Go

Backend & Databases: Node.js, Express.js, SQL (MySQL, PostgreSQL), NoSQL (MongoDB, DynamoDB)

AI/ML: PyTorch, TensorFlow, Scikit-learn, XGBoost, R, LangChain (RAG), NLP, Generative AI, NumPy, Pandas

Cloud/DevOps & Web: AWS, GCP, Azure, CI/CD, Git, Linux/Unix, React, Angular, Vue, Bootstrap, Web3, HTML5/CSS

Experience

Technolee **July 2024 - July 2025**
Machine Learning Engineer *Ahmedabad, India*

- Engineered and deployed a REST API that delivered **ML predictions < 200ms**, enabling **real-time dashboards across 20+ product lines and eliminating 10+ hours of manual reporting each week**.
- Built and deployed a **logistic regression model** on **30K+ sales records**, achieving **80% accuracy** and **reducing forecasting errors by 25%,** improving **demand planning across 20+ apparel categories**.
- Automated **PostgreSQL + NLP ETL pipeline** with custom scheduling, **deployed on GCP**, processing **50K+ daily records** and enabling analysts to work with daily **refreshed insights instead of weekly updates.**

Indian Space Research Organization (ISRO) **January 2024 - July 2024**
AI/ML Engineer intern *Ahmedabad, India*

- **Built enterprise satellite data pipeline** with automated validation protocols, **achieving 99.9% data integrity** while processing 1+ GB of datasets daily for solar insolation forecasting in renewable energy applications.
- **Enhanced PyTorch/CUDA and MATLAB LSTM-based forecasting** models through advanced feature engineering, **delivering 25% error reduction and 20% efficiency** gains for satellite operations.
- Developed **live analytics dashboards** with **Matplotlib/Seaborn for daily scientist use**, cutting **reporting cycles by 40**% and streamlining executive decision-making.

Cre-Art Solutions **June 2023 - August 2023**
Software Engineer Intern *Ahmedabad, India*

- **Redesigned Django REST APIs** with advanced OOP patterns, **achieving 20% performance boost** while processing 50K+ daily financial transactions for trading platform.
- **Built automated validation framework** with real-time error detection**, reducing accounting discrepancies by 18%** and ensuring financial compliance standards across ₹50+ lakh monthly transactions.
- **Created Power BI dashboards** with secure SQL integration, providing real-time P&L visibility that reduced **monthly financial close time by 30% for management reporting**.

Personal Projects

AI-Powered Professor Rating Platform | LangChain, Pinecone, FastAPI, Redis, WebSockets, JavaScript **August 2025**

- Built an **AI-powered rating platform** using **LangChain + Pinecone (RAG)** on **RateMyProfessor data**, designed **for students** to search and discover professors with **improved accuracy and faster responses** compared to keyword search.
- Designed **a FastAPI WebSocket architecture** with **Redis caching**, tested at **250+ concurrent connections**, achieving **99% uptime** and delivering real-time search experiences on local deployment**.**
- Developed a **responsive web interface** with **HTML/CSS**, implementing **AI-driven recommendations** that boosted **user session duration by 45%**, demonstrating improved engagement in a solo-developed project.

Osho Voice TTS Pipeline | *Python, PyTorch, Whisper, Coqui TTS, Librosa* **January 2025**

- Architected and deployed **a scalable TTS system** using **transformer-based models**, processing **50K+ audio samples** with **95% accuracy (Coqui defaults**), and validated results through external tester feedback.
- Built **an automated ML data pipeline** with **Python scripts** and **regex-based validation**, processing **10K+ scraped audio** samples, **reducing preprocessing overhead by 80%,** and ensuring high-quality training data.
- Conducted **benchmarking against baseline TTS systems**, leveraging **CUDA acceleration** and **experiment versioning**, which improved **inference speed and reliability** for production-ready deployment.