

SHREYAS MAKWANA

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Professional Summary

Computer Science engineering student with expertise in AI/ML and full-stack development. Constructed production-ready RAG systems delivering 92% citation precision and scalable applications handling 50+ concurrent users. Developed neural text-to-speech systems with 4.2/5 MOS scores and document analysis models with 82.6% mAP performance. Proficient in various DevOps tools and software testing services with strong foundation.

Education

Indian Institute of Information Technology Vadodara

August 2022 – June 2026

Bachelor of Technology in Computer Science and Engineering

Work Experience

Tilva Artsoft

May 2025 – July 2025

AI Software Engineer Intern

On Site — [\[Certificate\]](#)

- Engineered FastAPI backend and Next.js frontend scaffolder enabling automated static deployments, reducing project setup time by **80%** and improving team productivity
- Established CI/CD pipelines with Docker containerization, cutting deployment time from **20 minutes to 4 minutes** and achieving **99.9% uptime**
- Integrated Redis caching and monitoring with Prometheus/Grafana, optimizing **P95 latency to 1.8s** and increasing system stability by **25%**

Projects

DocSense AI: RAG Intelligence Platform | *Next.js, FastAPI, PostgreSQL, Vector DB* [\[Live Link\]](#)

July 2025

- Developed cloud-deployed RAG platform with JWT authentication processing **10MB PDFs** in **6-15s** with **25+** conversational memory turns across **300+** validation tests
- Built RAG pipeline using sentence-transformer embeddings and pgvector achieving **92%** citation accuracy with **50-120ms** vector search latency
- Deployed full-stack application on Vercel/Render with Supabase Auth, REST APIs, and automated CI/CD achieving **2-3s** response times

Sync Pad - Collaborative Text Editor | *Django, WebSockets, Yjs, React* [\[GitHub\]](#)

May 2025

- Built CRDT-based collaborative editor with Yjs and Remirror supporting **50+** concurrent users with **sub-150ms** update latency under load testing
- Engineered Django Channels with WebSockets and Redis improving synchronization efficiency by **65%** and reducing reconnection delays by **45%**
- Containerized Django + React application with optimized caching achieving **99.9%** availability and maintaining **sub-200ms** API response times

Neural Text-to-Speech System | *PyTorch, CUDA, Streamlit* [\[Live Link\]](#)

March 2025

- Implemented Tacotron2+HiFi-GAN TTS pipeline achieving **4.2/5** MOS score through advanced spectrogram and prosody enhancement techniques
- Optimized PyTorch inference with CUDA acceleration reducing synthesis latency by **45%** from **2.1s to 1.15s**
- Created Transformer-based grapheme-to-phoneme converter with **98%** accuracy and implemented Streamlit web interface

Technical Skills

- Programming Languages:** Python, JavaScript, TypeScript, C++, Java, SQL, HTML5, CSS3
- Machine Learning & AI:** PyTorch, TensorFlow, Scikit-learn, Transformers, LangChain, OpenCV, CUDA
- Web Technologies:** React.js, Next.js, Django, FastAPI, Node.js, RESTful APIs, WebSockets, Streamlit
- Databases & DevOps:** PostgreSQL, Redis, MongoDB, Docker, Git, CI/CD, Prometheus, Grafana, AWS

Achievements

- Achieved **3-Star** CodeChef rating (**Rank 1687**) and **1600+** LeetCode rating with **300+** problems solved demonstrating strong algorithmic skills [\[CodeChef\]](#) [\[LeetCode\]](#)
- Won **2nd place** in campus hackathon for ML solution achieving **91%** prediction accuracy with data science techniques
- Completed **NVIDIA Deep Learning** Institute Certification in neural networks with **95%** assessment score [\[Certificate\]](#)