Dheeren Tejani

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Summary

Final-year **B.Sc. Artificial Intelligence** student specializing in **applied Machine Learning and AI System Engineering**. Experienced in developing **Computer Vision pipelines**, **healthcare AI applications**, and **LLM-based analytics tools**. Skilled in designing **deployable AI models** with **PyTorch, TensorRT, and FastAPI**, and integrating them with frontend interfaces using React/TypeScript.

Education

B.Sc. Artificial Intelligence, Vivekanand Education Society of Arts, Science and Commerce (Autonomous), Mumbai — Aug 2021 – Apr 2026 (Expected)
Relevant Coursework: Data Structures & Algorithms, Machine Learning, Deep Learning, Computer Vision, NLP, Cloud Computing

Skills

AI/ML: PyTorch, TensorRT, Computer Vision, NLP, Super-Resolution, Model Optimization
Deployment: FastAPI, Streamlit, Docker, Git, MLflow
Data/Tools: NumPy, Pandas, OpenCV, Matplotlib
Web: React.JS, TypeScript, Tailwind CSS
Languages: Python, JavaScript/TypeScript (All basic)

Projects

Hyper-Optimized Video Super-Resolution Pipeline *PyTorch, TensorRT, OpenCV*

- Achieved **12× speedup** (0.5 FPS to 6 FPS) on RTX 3050 (4 GB VRAM) by converting models to **TensorRT**, implementing multithreading, and using GPU-accelerated optical flow & warping.
- Designed a multi-pass pipeline ensuring temporal consistency and optimized memory usage for real-time enhancement.

Image Super-Resolution Suite (2x, 4x) *PyTorch, FastAPI, React*

- Developed **ResNet50/VGG19**-based SR models and deployed them via FastAPI with dynamic model routing based on user selection.
- Built a React + TypeScript frontend supporting image upload, preview, and download with User-friendly UI

Diabetic Retinopathy Detection (In Progress) *Python, CV, Streamlit*

- Designing a medical imaging AI system to classify retinal images into severity levels and generate **natural-language diagnostic reports**.
- Implementing visual explanation overlays (e.g., Grad-CAM) and severity charts for improved interpretability.

Other Notable Work

- **Cyberpunk Stable Diffusion Fine-Tune:** Domain-specific fine-tuning of Stable Diffusion 1.5 using PEFT and bitsandbytes and Accelerate
- **Legal Document Analyzer:** NLP-based contract analysis using Gemini API to identify risky clauses and provide recommendations.
- **Talk-to-Data Dashboard:** Auto EDA tool with AI-powered dataset querying..
- **Chatbot UI Clone:** React-based conversational app with Gemini API, markdown rendering, and web search, Chat History Saving and Routing among it.

Hackathons & Achievements

Odoo Company Hackathon — Built a StackOverFlow prototype with Google OAuth login under time constraints.
Multiple independent AI projects deployed or packaged with production-ready pipelines.