Tejas Raman

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Education

University of Texas at Dallas Dallas, TX
Bachelor of Science in Computer Science, GPA: 3.73 *August 2024 – May 2027*

- Academic Excellence Scholar
- Relevant Coursework: Data Structures and Algorithms, Discrete Mathematics for Computing, Computer Architecture, Linear Algebra, UNIX Programming, Software Engineering, Computer Science 2

Technical Skills

Languages: Python, SQL, JavaScript, TypeScript, C++, Java, C#, HTML/CSS, LaTeX
Platform Development: React/React Native, Express.js, .NET MAUI, Flask, Tailwind, REST API
Machine Learning & AI: PyTorch, TensorFlow, Scikit-Learn, ResNet, YOLO, OpenCV, CNN-based image analysis
Data Analysis: Pandas, NumPy, Matplotlib, Seaborn
Databases: MongoDB, Pinecone, MySQL, PostgreSQL
Developer Tools: GitHub, VS Code, IntelliJ, Eclipse, Vercel, PyCharm, CLion, Figma, TeXworks

Projects

ElevAIte | *REST API, React, Express, RAG, Pinecone, MongoDB, LangChain* May 2025

- Developed an agentic AI-powered academic and financial event generator from natural language queries with 95% accuracy using cosine similarity on Pinecone vector embeddings for context awareness.
- Built an Express.js API server that provides developers with secure API key access to query their data and interact with the agentic AI advisor, optimized to achieve sub-2ms latency for real-time responses and seamless integration with external applications.

ThreadSight | *Python, Resnet50, PyTorch, OpenCV, Matplotlib, NumPy, Pillow (PIL)* July 2025

- Developed a computer vision model that classifies clothing images into 13 fashion categories using a ResNet-50 CNN trained on 13,000 preprocessed images, achieving an F1-score of 0.83 and 57% validation accuracy
- Implemented Grad-CAM visualizations to generate heatmaps highlighting key image regions, improving model interpretability and improve debugging

Experience

Project Mentee January 2025 – June 2025
AI Society, University of Texas at Dallas *Richardson, TX*

- Delivered a comprehensive presentation outlining the tech stack, RAG architecture, and application workflow to a panel of 5 industry judges, earning 2nd place out of 13 projects for best use of AI to enhance student productivity
- Collaborated with a team of 6 to develop TaskMasterAI, an AI-powered academic assistant that generates flashcards and quizzes from the users inputted syllabus
- Designed and integrated a LangChain-powered RAG architecture leveraging structured schemas to improve syllabus parsing accuracy by 98%, enabling precise context retrieval and efficient interaction between backend AI services and the React frontend

Hacker November 2024
HackUTD, University of Texas at Dallas *Richardson, TX*

- Developed SignLangAI, a real-time sign language recognition web app using HTML, CSS, and JavaScript, enabling instant gesture translation via webcam without external hardware.
- Integrated TensorFlow.js with the MobileNet architecture to perform in-browser deep learning for accessible and low-latency sign detection, achieving <1 ms latency for real time recognition.
- Optimized video frame handling and model input pipeline to deliver smooth, accurate hand sign detection, improving communication accessibility.