

# Tejas Raman

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## EDUCATION

### University of Texas at Dallas

Dallas, TX

*Bachelor of Science in Computer Science, GPA: 3.73*

*Aug 2024 – May 2027*

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

## TECHNICAL SKILLS

**Languages:** Python, SQL, JavaScript, TypeScript, C++, Java, C#, HTML/CSS, LaTeX

**Platform Development:** Full-Stack (MERN), React/React Native, Express.js, .NET MAUI, Flask, TailwindCSS, RESTful 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

### SynthiSched | *RESTful 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.
- Implemented a RAG architecture to provide context-aware responses and lower query time down to 2ms, orchestrated via LangChain for prompt flows and chat memory.

### 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 - May 2025

*AI Society, University of Texas at Dallas*

*Richardson, TX*

- Collaborated with a team of 6 to develop TaskMasterAI, an AI-powered academic assistant that generates flashcards and quizzes from the users inputted syllabus
- Engineered an Express.js server to manage API routing between backend services and the React frontend, contributing 2,000+ lines of code toward developing the REST API and implementing the LangChain-powered syllabus parser agent
- Co-created and delivered a final presentation detailing our tech stack, RAG architecture, and application workflow to a panel of 5 industry judges; Placed 2nd out of 13 projects for best use of AI to enhance student productivity

## EXTRA-CURRICULAR ACTIVITIES

- Active Member of the Artificial Intelligence Society (AIS) at UT Dallas
- Competed in HackAI 2025, developed Arkos — a financial report querying app that extracts key data from uploaded documents
- Competed in HackUTD 2024, developed SignLangAI — an accessibility tool enabling disabled users to communicate using American Sign Language (ASL) without needing external hardware