

Ved Patel

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EDUCATION

The University of Texas at Dallas

Richardson, TX

Bachelor of Science in Computer Science, Minor in Innovation & Entrepreneurship

May 2028

- Relevant Coursework: Computer Science II, Computer Architecture, Professional and Technical Communication, Probability and Statistics in Computer Science and Software Engineering

PROFESSIONAL EXPERIENCE

VisorFin Tech Services (VFIN)

Dallas, TX

Software Engineering Intern

Jun. 2025 – Feb. 2026

- Built 10+ RESTful APIs in JavaScript with PostgreSQL and pgAdmin4 that securely process user data and thousands of transactions daily.
- Diagnosed and reduced manual work by 20 hours a week by redesigning the architecture and automating pipelines using Google Cloud services.
- Engineered Swift and Kotlin interfaces for a mobile app, connecting APIs to the frontend and implementing MVC architecture across core user flows.
- Collaborated with senior engineers and executive managers on software architecture decisions and accelerated prototypes for new product features.

Comet Robotics

Richardson, TX

Programmer

Aug. 2025 – Present

- Collaborated with a team of four to develop Autonomous Control Systems for competitive robotics, implementing particle filtering algorithms for real-time localization.
- Integrated ACS with onboard sensors and an NVIDIA Jetson Nano, enabling rapid on-device processing of complex control algorithms.
- Placed 26th at the International VEXU Robotics Competition.

Google Developer Group

UT Dallas

Sprint Mentor

Aug. 2026 – Present

- Mentoring a group of 5 students on backend development and AI/ML integration for a full-stack project.
- Teaching architecture concepts, REST API design, Docker containerization, and cloud deployment principles.
- Leading architecture reviews and debugging sessions, helping teams deliver functional MVP demos.

TECHNICAL PROJECTS

NexDrop | Apr. 2026

- Developed computer vision pipelines using OpenCV and scikit-learn to power machine-learning-based Geographic Information Systems (GIS) that identify and extract building data from satellite imagery through matrix operations.
- Engineered FastAPI endpoints integrating Ollama and Qwen2.5 to generate ROI analyses and support lead generation, using automated CI/CD pipelines for reliable deployment.

AskUTD | Sep. 2026 – Present

- Building a self-correcting RAG assistant across 200+ UTD documents and websites, combining hybrid BM25 and dense retrieval with Query Decomposition, Semantic Retrieval, and Conversational Memory to answer complex academic policy questions.
- Engineering a local Cross-Encoder and RAG self-correction loop to sharpen retrieval precision.
- Running RAGAS evaluations to track accuracy and context precision for Llama models deployed via FastAPI.

TECHNICAL SKILLS

Languages:	Python, JavaScript, SQL, TypeScript, C++, Java, C#, Swift, Kotlin, Bash/Shell Scripting
Web & Frameworks:	React, Node.js, FastAPI, Express.js, Django, Next.js, Flask, Tailwind
AI/ML:	PyTorch, TensorFlow, RAG, ChromaDB, NumPy, scikit-learn, OpenCV, NLP, pandas
Cloud, Data & Tools:	Git, Docker, AWS, Google Cloud Platform, PostgreSQL, Linux, Firebase, Azure
Concepts:	Data Structures & Algorithms, Recursion and Trees, System Design, Software Architecture, REST APIs, Database Design, Object-Oriented Programming, CI/CD