

Venktesh Tapadia

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EDUCATION

University of South Florida | GPA: 3.98/4.00

May 2027

Bachelor of Science in Computer Science

Achievements: Dean's List Scholar, 2x Hackathon Winner, USF Green & Gold Directors Scholarship Recipient

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, C#, C++, TypeScript

Frameworks: React, Node.js, Express, Next.js, .NET, Spring Boot

Tools/Databases: Git, Docker, Linux, AWS (S3, EC2, DynamoDB), PostgreSQL, MongoDB, Supabase

AI/ML: LLM Fine-tuning (LoRA), RAG, LangChain, Gemini API, Hugging Face, Vector Databases

WORK EXPERIENCE

Software Engineering Intern | VSP Vision

May 2026 - August 2026 (Upcoming)

Research Assistant | Reality, Autonomy, and Robot Experience Lab at USF

May 2025 - August 2025

- Engineered a full-stack Python and React assistive system with **3-tier architecture** for cognitive disability research.
- Reduced task completion time by **50%** in user trials by designing a low-latency interaction interface via WebSocket.
- Improved instruction adaptation accuracy by **30%** by fine-tuning an LLM using LoRA based on user behavior.

Software Engineering Intern | Interlinked (YC S24)

Jan 2025 - May 2025

- Delivered **live disaster response** insights by building frontend in Next.js and TypeScript for the Interlinked platform.
- Reduced data refresh time by **30%** by architecting a Python, Mapbox, and AWS S3 evacuation mapping pipeline.
- Boosted deployment speed by **40%** by containerizing backend services with Docker and optimizing CI/CD workflows.

Software Development Intern | TrackSo

May 2024 - August 2024

- Built IoT-based .NET and C# dashboards to monitor **20+** solar plant metrics with real-time anomaly detection.
- Decreased incident response time by **50%** by automating event notifications using Amazon SES.
- Implemented RESTful APIs with token-based access control, handling **1,000+** daily requests at under **200ms** latency.

PROJECTS

Polaris - AI DevOps Security Agent | Next.js, FastAPI, Python, Gemini API, PostgreSQL, GitHub API

- Built a GitHub App that autonomously scans PRs for IaC security issues and posts inline fixes in under **60 seconds**.
- Designed a **dual-agent Gemini pipeline** detecting vulnerabilities across 4 file types including Terraform and K8s.
- Mapped findings to 2 compliance frameworks (**CIS, SOC2**) using Gemini to generate minimal-diff code fixes per PR.

CarbonCTRL | React, Flask, PostgreSQL, Gemini AI API, TensorFlow, REST API

- Built a **hackathon-winning** AI-powered carbon tracking platform, improving reporting efficiency by **30%**.
- Deployed a **Flask** backend with a **Linear Regression model** to generate carbon insights visualized using **Chart.js**.
- Reduced sustainability costs by **40%** through carbon offset project recommendations powered by Gemini AI.

LEADERSHIP

Tech Lead | Google Developers Student Club at USF

July 2024 - Present

- Conducted workshops on Git, REST APIs, AWS, and JavaScript for 50+ students, increasing attendance by 30%.
- Spearheaded development of USF's annual hackathon, coordinating logistics and outreach for 300+ participants.

Computer Science Tutor | USF College of Engineering

June 2025 - Dec 2025

- Tutored 15+ students weekly in Python, C, and C++, resulting in a 20% average grade improvement.
- Led group sessions for 3 core CS courses, improving exam performance through guided coding and problem solving.