

Ankur Desai

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EDUCATION

Michigan State University

B.S. in Computer Science

Expected, May 2028

East Lansing, MI

- GPA: 3.74 / 4.0
- Vice President of Claude Builders Club @ MSU
- Relevant Coursework: Linear Algebra, Discrete Mathematics, Object-Oriented Software Design, Computer Organization and Architecture, Data Structures & Algorithms

EXPERIENCE

Project Team Lead

ThinkStack

August 2025 - Present

East Lansing, MI

- Architected full-stack application using React, Vite, Tailwind CSS, and Electron, implementing RESTful API with FastAPI, PostgreSQL, and Neo4j for relational and graph data storage
- Led cross-functional team of 6 through Agile/SCRUM methodology, implementing CI/CD pipelines with GitHub Actions and Docker, reducing deployment cycle from 8 months to 3 months (62% improvement)

Web Development Intern

WFS Consulting Group

May 2025 - August 2025

Plymouth, MI

- Designed and developed responsive website using HTML5, CSS3, and JavaScript, achieving 95+ Google Lighthouse scores and cross-browser compatibility across Chrome, Firefox, Safari, and Edge
- Deployed production website to Linux servers with SSL security protocols, achieving 99.9% uptime for global access

PROJECTS

Autonomous Systems Engineer

SUAS Drone | Python, TensorFlow, OpenCV, Nvidia Jetson

September 2025 - Present

East Lansing, MI

- Architected autonomous drone software on Nvidia Jetson with real-time sensor fusion for obstacle avoidance
- Engineered end-to-end ML pipeline: curated 5,000+ aerial images with annotations, applied data augmentation, and optimized YOLOv11 using TensorRT achieving 89% mAP@0.5 IoU at 30 FPS on embedded hardware
- Integrated CV system with Cube Orange+ flight controller via MAVLink protocol, enabling vision-based position hold and autonomous payload delivery within 10-foot CEP from 70+ feet altitude

Mira - AI Personal Assistant

Full-Stack Development | Python, FastAPI, SQL, Electron

May 2025 - September 2025

GitHub Link

- Engineered real-time audio pipeline with noise reduction using spectral gating, improving OpenAI Whisper speech recognition from 78% to 95% accuracy in noisy environments (SNR < 10dB)
- Developed NLP pipeline integrating Whisper for transcription, DBSCAN clustering for speaker diarization, and Gemini API for intent classification, processing 1,000+ daily interactions with 92% accuracy
- Implemented client selection algorithm using RSSI proximity estimation and FFT ambient noise analysis, dynamically routing commands to optimal device with 89% selection accuracy

WizViz - SpartaHack X

Hackathon Project | Python, OpenCV, MediaPipe, PyGame

February 2025

Devpost Link

- Built real-time AR game using OpenCV and PyGame, winning Best Game amongst 100+ projects at SpartaHack X
- Implemented gesture-based controls and collision detection for 2-player wizard duels using MediaPipe Pose for skeletal tracking of 33 body landmarks with sub-30ms latency

TECHNICAL SKILLS

Languages Python, Java, C/C++, JavaScript/TypeScript, HTML/CSS, SQL, Cypher, Bash
Libraries TensorFlow, PyTorch, OpenCV, MediaPipe, Hugging Face, YOLOv11, NumPy, Pandas, Scikit-learn
Frameworks React, Vite, Node.js, Electron, FastAPI, SQLAlchemy, Neo4j, PostgreSQL, Tailwind CSS
Tools Docker, Git, CI/CD Pipelines, Nvidia Jetson, AWS (Lambda, RDS, ECS)
Focus Areas Computer Vision, Deep Learning, Real-Time Inference, Autonomous Systems