

Ankur Desai

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EDUCATION

Michigan State University <i>B.S. in Computer Science</i>	Expected, May 2028 <i>East Lansing, MI</i>
<ul style="list-style-type: none">• 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 <i>ThinkStack</i>	August 2025 - Present <i>East Lansing, MI</i>
<ul style="list-style-type: none">• 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 <i>WFS Consulting Group</i>	May 2025 - August 2025 <i>Plymouth, MI</i>
<ul style="list-style-type: none">• 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 <i>SUAS Drone Python, TensorFlow, OpenCV, Nvidia Jetson</i>	September 2025 - Present <i>East Lansing, MI</i>
<ul style="list-style-type: none">• 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 <i>Full-Stack Development Python, FastAPI, SQL, Electron</i>	May 2025 - September 2025 <i>GitHub Link</i>
<ul style="list-style-type: none">• Engineered real-time audio pipeline with noise reduction using spectral gating, improving OpenAI Whisper speech recognition from 78% to 95% accuracy in noisy environments ($\text{SNR} < 10\text{dB}$)• 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 <i>Hackathon Project Python, OpenCV, MediaPipe, PyGame</i>	February 2025 <i>Devpost Link</i>
<ul style="list-style-type: none">• 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