

# Ankur Desai

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## EDUCATION

### Michigan State University

*B.S. in Computer Science*

- GPA: 3.74 / 4.0
- Vice President of Claude Builders Club @ MSU

Expected, May 2028

*East Lansing, MI*

## EXPERIENCE

### Project Team Lead

*ThinkStack*

September 2025 - Present

*East Lansing, MI*

- Design, launch, and iterate a Next.js webapp and Electron desktop app for note-taking and concept visualization
- Build a FastAPI REST API with SQLAlchemy, PostgreSQL, and Neo4j to handle authentication, manage user data, and enable complex relationship visualizations, enhancing app usability and data accessibility
- Accelerated product deployment from 8 months to 3 months by building and leading a cross-functional team of 4 software engineers and 2 designers, directing SCRUM meetings, and implementing CI/CD pipelines

### Web Development Intern

*WFS Consulting Group*

May 2025 - August 2025

*Plymouth, MI*

- Crafted website frame in Figma and implemented responsive, dynamic elements with CSS media queries and JavaScript
- Deployed the website on GoDaddy Linux servers, enabling global client access and ensuring full functionality
- Increased customer engagement by 250% by integrating contact forms, social media links, and interactive widgets

## PROJECTS

### Autonomous Systems Engineer

*SUAS Drone | Python, TensorFlow, CV, Nvidia Jetson*

September 2025 - Present

*East Lansing, MI*

- Design autonomous drones for SUAS competitions, completing aerial races, waypoint navigation, and precise payload deliveries from over 70 feet using Nvidia Jetson for real-time kinematics and flight controller interfacing
- Collect and curate custom aerial imagery datasets, then train and fine-tune YOLOv11 vision models, achieving accurate object detection and payload delivery within 10 feet of the target at high altitudes and windy conditions
- Collaborate with hardware and software teams, integrating vision models and pathing algorithms into the drone

### Mira - AI Personal Assistant

*Full-Stack Development | Python, FastAPI, SQL, Electron, Node.js*

May 2025 - September 2025

*GitHub Link*

- Developed a REST API using FastAPI, Whisper, noisereduce, DBScan, and Gemini to transcribe audio, assign speaker IDs, extract actionable tasks, and enable conversational interactions and voice commands with Mira
- Designed an Electron desktop client that listens passively for voice commands and maintains interaction history, utilizing OAuth2, JWT, and secret Keychain's to maintain login state and authenticate users via Google and GitHub
- Implemented a client-selection algorithm with Voice Activity Detection (VAD) to support multiple devices on each Mira Network, and intelligently switching between connected clients based on proximity, uptime, and noise level
- Deployed the API on AWS Lambda, and utilized Amazon RDS and SQLAlchemy to store user data and interactions

### WizViz (SpartaHack X)

*Hackathon Project | Python, OpenCV, MediaPipe, PyGame*

February 2025

*Devpost Link*

- Developed an augmented reality game using Computer Vision and PyGame where two players can duel as wizards, casting spells, dodging attacks, and using healing potions, all in real-time via hand gestures and body movements
- Awarded Best Game in Interactive Media track, among 100+ projects and 350+ participants at SpartaHack X
- Applied OpenCV and MediaPipe Pose model to track multiple player movements, enabling gesture recognition

## TECHNICAL SKILLS

**Languages** ..... Java, Python, JavaScript, SQL, Bash, C++  
**Frameworks & Libraries** ..... React, Node.js, Electron, FastAPI, SQLAlchemy, MediaPipe, OpenCV, OAuth, JWT  
**Databases** ..... Neo4j, PostgreSQL, AWS RDS, SQLAlchemy  
**Tools & Platforms** ..... Docker, Git, CI/CD Pipelines, Cursor, Figma, AWS Lambda, AWS ECS, Google Cloud