

# Ankur Desai

(248) 657 · 3805 ◇ ardusa05@gmail.com ◇ <https://ardusa.github.io>

## 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 200% by integrating contact forms, social media links, and interactive widgets

## PROJECTS

### 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

### 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
- 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

## TECHNICAL SKILLS

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