

# Elijah Tabachnik

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## Education

### University of California Irvine

Expected Jun. 2026

B.S. in Computer Science | GPA: 3.55

- Relevant Coursework: Algorithms & Data Structures, Operating Systems, Machine Learning, Artificial Intelligence, Probabilistic Programming, Software Engineering, Database Systems

## Experience

### AI & Software Engineer Intern 2025

Jun. 2025 - Jul.

Humanico

Irvine, CA

- Designed and deployed an internal AI automation tool using Python and REST APIs, reducing average issue resolution time by 30% for IT specialists.
- Enhanced the company's user-facing web platform using HTML and CSS, improving usability and increasing engagement from thousands of users.
- Built and deployed an AI-driven workflow automation system that boosted productivity and became the primary tool for over 50% of staff.

### AI & Software Engineer Intern

Jun. 2024 - Jan. 2025

Leucadia Therapeutics

Riverside, CA

- Developed a conversational AI avatar with real-time voice interaction and lip-sync rendering, utilizing LLaMA and the OpenAI API, supporting immersive user interaction scenarios.
- Designed a user-facing interface for researchers to demo and interact with the avatar system in real-time, allowing for thousands of clients to be tested.
- Deployed applications on Azure and AWS, using Docker, implementing HIPAA-compliant cloud architectures with an emphasis on data security and scalability.
- Built and maintained Flask-based REST APIs and SQL backends for handling sensitive health data for thousands of patients.

### Game Developer Intern

Oct. 2023 - Jan. 2024

Blue Rondo Games

Irvine, CA

- Developed core rhythm gameplay mechanics in Godot using GDScript, including beat detection and timing-based interactions.
- Collaborated on level design and user feedback tuning to balance challenge and player engagement.

## Projects

### Autonomous Drone | OpenCV, Yolo, OpenAI API, Python

Jun. 2025 - Current

- Developed an object-following system for autonomous drones by integrating YOLOv8 and OpenCV for real-time object detection and the OpenAI API for semantic interpretation, enabling robust tracking of both people and vehicles.
- Implemented natural language control by combining voice recognition with the OpenAI API, allowing users to issue voice commands to control drone behavior during flight.
- Built and labeled a custom image dataset to fine-tune YOLO for car-type classification (SUV, sedan, pickup) and successfully deployed the model for onboard inference in live drone missions.

### Extractorio | Unity, C#

Jan. 2024 - Current

- Co-developing a multiplayer resource extraction strategy game in Unity with custom logic for procedural terrain generation and AI-driven enemy behaviors.
- Implemented AI pathfinding using A\* and decision trees for procedurally generated terrain in Unity.
- Designed real-time resource and combat systems using multi-agent coordination, optimization heuristics, and Unity NavMesh pathfinding.

### Image Classification: Fashion-MNIST Benchmark | PyTorch, Python

May 2025

- Implemented and evaluated kNN, logistic regression, decision trees, and a feedforward neural network using PyTorch and scikit-learn.
- Tuned architecture and learning rates via grid search; FFN achieved 88.6% test accuracy.

## AI-Entrepreneur Competition Finalist | *Elevenlabs, OpenAI API, Python*

Jan. 2024

- Developed and pitched an innovative educational tool leveraging AI-generated avatars of historical figures to enhance student engagement and provide immersive, conversational learning experiences.
- Integrated OpenAI's GPT for dynamic dialogue generation, ElevenLabs speech synthesis for realistic voice emulation, and deepfake technology for visual realism.

## Technical Skills

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Languages: Python, C#, C++, Java, CSS, JavaScript, SQL

Web: Flask, REST APIs, GitHub Actions

Cloud & Tools: OpenCV, Yolo, Azure, AWS, Docker, Git, Linux, Unity, Godot, Jekyll

AI/ML: OpenAI API, ElevenLabs, HuggingFace, PyTorch

Interests: Hiking, Strategy Games, Camping, Biking