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 Jun. 2025 - Jul. 2025
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

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