Elijah Tabachnik

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UC Irvine CS student with a focus in intelligent systems. AI, and full-stack development. Passionate about autonomous systems and real-world problem solving.

Experience

Humanico

Software Engineer Intern

Assisting with AI integration and automation tasks using Python scripting.

Leucadia Therapeutics AI & Software Engineer Intern

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

Administrative Assistant

Supported general administrative functions, demonstrating adaptability and a proactive approach to office operations. Blue Rondo Games Oct. 2023 - Jan. 2024

Game Developer

- Contributed to the development of a **rhythm-based video game** in **Godot** using GDScript (Python-based).
- Designed and implemented timing systems and gameplay logic for beat-matching mechanics. .
- Participated in team sprints and code reviews to refine game architecture and asset pipelines.

Projects

Autonomous Drone SDK Integration

- Jun. 2025 Current Integrated Tello SDK with Python to issue real-time flight commands and execute scripted routines.
- Developed a command parser to interpret structured text instructions and control drone behavior.
- Experimented with YOLOv8 object detection for potential visual feedback loop and obstacle awareness.
- Integration of GPT-based interfaces to allow natural language mission input. •

Extractorio

- Co-developing a multiplayer resource extraction strategy game in Unity with custom logic for procedural terrain • generation and Al-driven enemy behaviors.
- Implemented AI pathfinding using A* and decision trees for procedurally generated terrain in Unity. .
- Designed real-time resource allocation and combat strategies requiring multi-agent coordination and optimization heuristics and implemented Unity NavMesh pathfinding for autonomous agent behavior.

Al-Entrepreneur Finalist

- 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.
- Selected as a finalist in a competitive AI entrepreneurship competition for the project's creativity, technical integration, and educational value. Apr. 2025

Text Classification and Sentiment Analysis

- Developed a text processing pipeline using scikit-learn to classify and analyze customer reviews for sentiment.
- Explored hyperparameter tuning and feature selection to improve model performance.
- Visualized word frequency distributions and sentiment trends using **Matplotlib**.

Education

University of California Irvine

B.S. in Computer Science with a focus in Intelligent Systems

• **GPA**: 3.58

Core CS Coursework

Algorithms & Data Structures, Operating Systems, Machine Learning, Artificial Intelligence, Discrete Mathematics, Database Systems, Software Engineering

Technical Skills

Languages: Python, C#, C++, Java, JavaScript, SQL Web: Flask, REST APIs, GitHub Actions Cloud & Tools: Azure, AWS, Docker, Git, Linux, Unity, Godot AI/ML: OpenAI API, ElevenLabs, HuggingFace, PyTorch Interests: Hiking, Strategy Games, Camping, Biking

Jan. 2024 - Current

Jun. 2024 - Jan. 2025

Jul. 2025 - Current

Expected Jun. 2026

Jan. 2023 - June 2026