

LILY MARY FARIS

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SKILLS AND INTERESTS

- Technical Skills: Python, C++, Java, HTML/CSS, React, Node.js, Linux, Docker, Kubernetes, PyTorch, Django, Jira, AWS, CUDA, OpenAI. Concepts in ML, AI, NLP, Full-stack development, Computer Vision, Scrum, Project Leadership, Data Structures and Algorithms, Research
- Languages: Fluent in English (native); Some conversational proficiency in Spanish, Arabic, and Chinese
- Interests: Environmental sustainability and justice, chess, visual arts

EDUCATION

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

Santa Cruz, CA

(MS) *Master of Science in Computer Science;*

Sep 2024 - Jun 2025

Degree completed in one-year intensive contiguous program, graduated with honors.

(BS) *Bachelor of Science in Computer Science with Honors;*

Sep 2021 - Jun 2024

Awards: Undergraduate Dean's Award Merit Scholarship, Dean's List 2021-24 (top 10%), College Scholars Program.

WORK EXPERIENCE

OUTLIER AI

AI Development Specialist

Nov 2024 - Present

- Evaluate and contribute to testing for AI-driven code generation systems to ensure accuracy, efficiency, and scalability.
- Leverage advanced debugging tools to offer expertised feedback that improves and trains Generative AI models.

UCSC LEARNING SUPPORT SERVICES

Santa Cruz, CA

Peer Tutor for CSE102, Analysis of Algorithms

Jan-Mar 2024

- Worked with students as a tutor for a foundational algorithms course. CRLA [<https://crla.net/>] Tutor Certified.

AMAZON OPERATIONS

Visalia, CA

RL Area Manager Intern

Jun-Aug 2023

- Completed 10 week internship as Area Manager in Amazon Operations
- Improved CPT efficiency by 5% via an independent improvement proposal project.

PROJECTS

'ROOT-WISE' CHATBOT

Santa Cruz, CA

Developer, Product Owner

Sep 2024 - Present

Developed an AI-powered RAG chatbot promoting sustainable, zero-waste cooking using NVIDIA's embedding models and OpenAI's LLMs. Built with FAISS vector store, custom retrieval pipelines, and contextual personalization based on the Institute for Functional Medicine (IFM) toolkit. Development ongoing under Leilani Gilpin's AIEA Lab.

- Achieved **82.5% personalization success** across user context dimensions; 100% success in dietary compliance.
- Evaluated LLM outputs across **Self-BLEU (0.0357)** for diversity, **relevance (avg. 0.7226)**, and **groundedness (avg. 0.0673)**.
- Achieved award recognition in the NVIDIA x LlamaIndex Developer Contest.

MARKETPLACE AI

LEEPS Lab, UCSC

Developer, Product Owner

Jan 2023 - Jun 2024

(Undergraduate Thesis) Investigated effects of algorithmic massification on features of a financial market using AI. Simulated increased accessibility of AI trading and reduced trader acquisition costs.

- Developed a configurable experimental (continuous double auction) market simulation that handles multiple traders.
- Constructed an algorithmic interpreter using OpenAI's ChatGPT API and LlamaIndex (RAG) to deploy a market strategy from using a .txt database and a user's instruction (natural language).
- Connected trader client and AI components to implement user strategy in the market simulation.

'ROBOT EAR'

Santa Cruz, CA

Developer

Sep 2023 - Jan 2024

Engineered an ML powered web app to transcribe audio (.wav) into precise sheet music (.pdf)

- Achieved a training accuracy of 90%; training set of 12,796 spectrograms (NSynth dataset) using an Alexey Dosovitskiy vision transformer.
- Accomplished a testing accuracy of 4% with a testing set of 4,096 spectrograms.

'TRUTH BEE TOLD'

Ann Arbor, MI

Product Owner

Jan 2021

Independently developed educational game about the ecological importance of native pollinators to environmental health.

- Collaborated with the Ann Arbor Environmental Commission (as a Youth Commissioner) on an educational campaign.