

LILY MARY FARIS

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Software engineer focused on building and deploying production AI systems, with experience in LLM-based workflows, automation, and reliability for real-world use cases.

SKILLS AND INTERESTS

- **Languages:** Python, SQL, JavaScript, Java, C++
- **AI / ML:** LLMs, RAG pipelines, FAISS, OpenAI APIs, PyTorch, NLP, Computer Vision
- **Systems & Tools:** Docker, Kubernetes, Linux, AWS, Node.js, React, n8n
- **Engineering Concepts:** Backend systems, workflow automation, distributed systems, data modeling
- **Additional:** Conversational Spanish, Arabic, and Chinese; environmental justice, 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

ARROW NORTH	
Software Engineer Intern	Nov 2025 - Present
<ul style="list-style-type: none">• Designed and deployed production AI-powered automation systems, transforming unstructured inputs (meeting transcripts, spreadsheets, notes) into reliable, structured workflows.• Translated business requirements into maintainable backend logic for task routing, approvals, and delivery using ClickUp, Slack, APIs, n8n, and custom tooling.• Optimized AI system performance using prompt design, confidence thresholds, and deterministic logic to improve accuracy and reliability.• Implemented human-in-the-loop review flows, fallback logic, and monitoring to support safe deployment and stakeholder trust.• Led communication with non-technical teammates, proactively identifying edge cases before deployment and independently debugging issues to improve system stability.	
OUTLIER AI	
AI Development Specialist	Nov 2024 - Dec 2025
<ul style="list-style-type: none">• Analyzed and stress-tested complex AI systems by identifying failure modes, debugging edge cases, and validating output accuracy.• Communicated technical findings clearly to improve downstream system behavior and reliability.	
AMAZON OPERATIONS - Intern	Jun - Aug 2023
<ul style="list-style-type: none">• Improved outbound process efficiency by 5% through data-driven analysis and cross-functional coordination.	

PROJECTS

'ROOT-WISE' CHATBOT	Santa Cruz, CA
Developer, Product Owner (graduate thesis)	Sep 2024 - Present
Developed an AI-powered retrieval-augmented generation (RAG) chatbot focused on sustainability and zero-waste cooking, leveraging NVIDIA embedding models , OpenAI LLMs , and a FAISS vector store with custom retrieval pipelines. Integrated domain-specific context from the Institute for Functional Medicine (IFM) toolkit.	
<ul style="list-style-type: none">• Achieved 82.5% personalization accuracy across user context dimensions and 100% dietary compliance.• Evaluated output quality using Self-BLEU (0.0357) for diversity, embedding-based relevance (0.72 avg), and groundedness (0.067 avg).• Recognized as an award winner in the NVIDIA × LlamaIndex Developer Contest; project developed in collaboration with Leilani Gilpin's AIEA Lab.	
MARKETPLACE AI	LEEPS Lab, UCSC
Developer, Product Owner (undergraduate thesis)	Jan 2023 - Jun 2024
Investigated effects of algorithmic massification on features of a financial market using AI. Simulated increased accessibility of AI trading and reduced trader acquisition costs.	
<ul style="list-style-type: none">• Developed a configurable (continuous double auction) market simulation that handles multiple participant traders at once.• 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.• Connected trader client and AI components to implement user strategy in the market simulation.	