

# Leah Uriarte

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## EDUCATION

### Harvey Mudd College

Expected May 2028

*B.S. Computer Science - 3.75 GPA, Dean's List*

## INTERNSHIP EXPERIENCE

### Software Developer Intern, Google

May 2025 - Present

- Architected book classification system with large language models, processing 23 million books at 93% genre accuracy
- Collaborated with partner to build bulk inference pipeline with Jax on Apache Beam in Python, enabling distributed inference across millions of records
- Achieved 95% precision, recall for BISAC classification and implemented semantic similarity evals with embeddings

## RESEARCH EXPERIENCE

### Researcher, Quantum Qasars Lab at Harvey Mudd College

Aug 2025 - Present

- Conducted outdoor telescope tests measuring bit error rate, signal strength, and alignment accuracy
- Programmed FPGAs and Raspberry Pis to control LED transmissions for quantum verification experiments

### Researcher, Analog Circuit Engineering Lab at Harvey Mudd College

Sept 2024 - May 2025

- Built end-to-end data processing pipeline in Python with Pandas and NumPy, implementing complex database merging, temporal analysis, and statistical validation across multi-semester datasets
- Developed framework implementing inter-rater reliability testing and statistical comparisons for construct validation

### Lead Researcher, Aspiring Scholars Directed Research Program

Sept 2022 - Feb 2024

- Led team of 7 analyzing post-quantum cryptography algorithms, co-authored peer-reviewed [paper](#) with 5 citations
- Conducted quantum key distribution research implementing BB84 protocol using Qiskit in Python with custom noise models for phonon scattering and charge fluctuations in quantum dot systems

### Nanoparticle Synthesis Research Apprentice, US Army

Jun 2023 - Aug 2023

- Engineered autonomous microfluidics robot using C++ and embedded C with multithreaded control of 4-channel valve manifolds and precision syringe pumps (awarded \$3,000 in grant funding)
- Integrated and calibrated UV-VIS spectrophotometer using Ocean Optics SDK, implementing real-time spectral analysis with automated wavelength calibration

## PROJECT EXPERIENCE

### Shop Story | *Github: [github.com/leahuriarte/shop-story](https://github.com/leahuriarte/shop-story)*

- Won \$3,000 hackathon prize; selected to productionize app for Shop platform serving over 7 million users
- Built AI-powered analytics mini-app processing user shopping data to generate personalized insights
- Designed Instagram Story-style interface using React and TypeScript for mobile shopping analytics

### Sentinel | *Github: [github.com/leahuriarte/sentinel](https://github.com/leahuriarte/sentinel)*

- Developed autonomous agent to dynamically discover, ingest, and process real-time intelligence to produce briefs
- Engineered multi-modal retrieval pipeline combining vector search, knowledge graphs, and hierarchical summarization

## LEADERSHIP

### Team Lead, Code the Change for UN High Commission of Refugees

Jan 2025 - Present

- Led 4-person team building React refugee visualization web app, providing technical guidance and code reviews
- Architected interactive mapping application integrating the UNHCR API and processing 24 years of global data
- Engineered demographic visualization system with D3 scaling, Leaflet maps, real-time data processing

## SKILLS

**Languages:** Python, Java, C/C++, JavaScript/TypeScript, SQL, HTML/CSS, Google Apps Script

**Frameworks & Libraries:** PyTorch, TensorFlow, React, Pandas, NumPy, Matplotlib, Seaborn, Qiskit

**Cloud & Tools:** Google Cloud Platform, Apache Beam, JAX, Git, REST APIs, Docker, Statistical Analysis

## AWARDS

Claremont Graduate University Hacks, 1st - Nov 2025 — Shopify Shop Minis Hackathon, Winner - Aug 2025 | Bruin AI Hackathon, Winner - April 2024 | Bloomberg BPuzzled, 2nd - October 2024 | Roy Rocklin Memorial Scholarship - May 2024 | National Merit Scholarship - February 2024 | Treasure Hacks, 2nd - May 2023 | Sonoma Hacks, 1st - Apr 2023