Annmaria Antony

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Education

Stanford University B.S. Computer Science | *GPA: 4.0* | Expected Graduation: June 2026

The Harker School High School Diploma | SAT Score: 1600/1600

Experience

Integrated Biosciences — Redwood City, CA
Machine Learning Research Intern — September 2025 - Present

- Developing a multimodal aging foundation model by integrating longitudinal in vivo mouse trajectories with human fibroblast transcriptomic datasets to predict cellular senescence and tissue-level aging phenotypes.

NVIDIA Corporation — Santa Clara, CA
Software Engineer Intern — June 2025 - September 2025

- Co-developed Zero Touch Flow, NVIDIA's first fully automated debugger for VLSI place-and-route workflows, integrating LLM-based reasoning to automate error diagnosis across the physical-design pipeline.

Intel Corporation — Santa Clara, CA
Software Engineer Intern — April 2024 - September 2024

- Developed a new LLM benchmarking feature on the Deep Learning Workbench.
- Currently used by Intel to demonstrate effectiveness of Intel's OpenVINO toolkit in preserving $\sim 97\%$ of inference capabilities, showcasing competitive performance on par with standard models used by industry rivals.

Pine Tree Health — Palo Alto, CA
Founding Engineer — January 2024 - July 2024

- Built a scalable healthcare application for a start-up aiming to use AI to overturn medical denials at lower costs.
- Researched retrieval-augmented generation (RAG) and multi-agent systems to reduce hallucinations.
- Advised by Steve Blank, Shawn Carolan (Menlo Ventures), Jennifer Carolan (Reach Capital), and others.

Stanford University Computer Science Department — Stanford, CA
Computer Science Teaching Assistant — January 2024 - June 2024

- Taught a weekly section, hosted office hours, and graded exams for CS106A and CS106B.

Harvard Medical School — Boston, MA
Neuroscience Research Assistant — June 2022 - August 2022

- Applied optogenetics to study the role of D1/D2 receptor heteromers in preserving dopamine sensitivity.

University of California, Santa Cruz — Santa Cruz, CA
Electrical Engineering Research Assistant — June 2021 - December 2021

- Built a ring resonator capable of ultrasensitive detection of the spike glycoprotein on Ansys Lumerical software.

National University Health System — Singapore
Machine Learning Research Assistant — November 2020 - March 2021

- Built a natural language processing (NLP) algorithm and recurrent neural network (RNN) to deliver patient diagnoses based on radiology reports, improving diagnostic efficiency and accuracy for healthcare providers.

Technical Skills

Programming Languages: Python, C/C++, Java, Mathematica, CLIPS/Jess, HTML/CSS/JS

DevOps and Tools: Git/GitHub, Docker, Swagger/OpenAPI, MongoDB, JSON Web Tokens, Node.js, React.js

Selected Projects

PineTime OS: Built a barebones operating system for the PineTime smartwatch, implementing custom SPI, display, and time drivers on Nordic's nRF52832 SoC. Flashed standalone firmware using OpenOCD and ST-Link, with custom linker scripts, startup assembly, and OpenOCD configuration files.

Label-free optical biosensor: Established proof-of-concept on Lumerical software, using the Finite-Difference Eigenmode solver. Prototype implements a ring resonator capable of ultrasensitive detection of the spike glycoprotein.

Awards

U.S. Presidential Scholar — The White House
Named the top female high school graduate in California by President Biden. — May 2023

Silver Medal, International Medicine & Disease Olympiad — IMDO Board
Represented the United States at the world championship for medicine and disease. — August 2021

Volunteering

U.S. Presidential Scholars Foundation (Council Member), Girl Scouts USA (Alum), United Nations (Delegate)

Interests

Debate (Stanford Debate Society), polo (Stanford Polo Club), philosophy, writing