

# Nithya Appannagaari

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## EDUCATION

**University of California, Berkeley** *B.S. Electrical Engineering and Computer Science* May 2027

**Relevant Coursework:** Data Structures, Structure and Interpretation of Computer Programs, Designing Information Devices & Systems, Linear Algebra

**Awards:** NMSQT 2024 National Merit Scholarship Winner, Technovation 2023 Global Semifinalist, NCWIT 2023 AiC San Francisco Affiliate Winner and National Honorable Mention

## WORK EXPERIENCE

**Eric and Wendy Schmidt Center for Data Science & Environment (DSE)** Berkeley, CA  
*Software Engineer Intern* Oct. 2024 –

- Contributed to the development of a Python-based wildlife classification app using Tkinter, in collaboration with Indigenous tribes, to process over 2,000 camera trap images from their Ancestral Territory.
- Focused on backend development, integrating computer vision with [software] for automated species classification and implementing ETL pipelines with Pandas Dataframes for JSON-based session management, ensuring scalable data handling.

**National Institute of Standards & Technology** Boulder, CO  
*Software Developer Intern* June 2023 – Aug. 2023

- Engineered a full-stack web app with Vue.js, Python, and TidyJS, optimizing chemical engineering data organization for government databases and improving analysis efficiency by 30%.
- Presented to 50+ NIST researchers and engineers at the poster ceremony, driving adoption and streamlining thermodynamic data workflows across national laboratories.

## RESEARCH

**Streets Lab [GitHub repository available on personal website]** Berkeley, CA  
*Undergraduate Machine Learning Researcher* Oct. 2024 –

- Fine-tuned LLMs using Ollama Python API for marker gene identification from scRNA-seq papers, and developed Jupyter notebooks to compare human-extracted data with LLM-generated data using set operations, Pandas, and NumPy.
- Designed relational databases with DuckDB and SQL, created Python scripts to dynamically update DuckDB tables with JSON data, and converted natural language to SQL queries for marker gene data retrieval.

## PROJECTS

**SustainaStyle (Hackathon Project) [available on personal GitHub]** Cupertino, CA  
*Software Developer* July 2023

- Developed a React Native app with Python Flask to help users find sustainable clothing alternatives, promoting ethical consumption through a TensorFlow classification model with 80% accuracy, using a stochastic gradient descent optimizer.

**Music.calm (Technovation Competition Project)** Cupertino, CA  
*Software Developer* Aug. 2022 - April 2023

- Developed a Swift iOS app to assist students with autism spectrum disorder in de-stressing through music therapy, integrating Firestore and iOS health queries.

## LEADERSHIP & INVOLVEMENT

**UC Berkeley Society of Women Engineers** Berkeley, CA  
*Public Relations Committee* Sept. 2024 -

- Creating and distributing promotional materials to engage 200+ members in technical opportunities to connect underrepresented with academic and industry mentors.

**UC Berkeley Indian Students Association** Berkeley, CA  
*Photographer/Videographer* Sept. 2024 -

- Produced promotional videos and documented events to market campus cultural events to over 4000 students.

## TECHNICAL SKILLS

**Languages:** Python, Java, Javascript, React, Swift, SQL

**Tools/Libraries:** Flask, NodeJS, DuckDB, MongoDB, RESTful API, Ollama, Git, Github Pages, TensorFlow, Tkinter