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 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