

# Rachel Lin

Berkeley, CA | 510-289-2883 | [raelin@berkeley.edu](mailto:raelin@berkeley.edu) | [LinkedIn](#) | [Github](#) | [Website](#)

## EDUCATION

### University of California, Berkeley

Berkeley, CA

*M.S. in Electrical Engineering and Computer Science*

*Expected Graduation: May 2025*

- GPA: 4.0/4.0 | Relevant Coursework: Large Language Model Agents, Human-Computer Interaction Research

*B.A. in Computer Science, Minor in Data Science*

*Aug. 2020 – May 2024*

- GPA: 3.82/4.0 | Relevant Coursework: Machine Learning, Data Engineering, Database Systems, Natural Language Processing, Data Structures & Algorithms, Computer Security, Probability, Web & HCD

## TECHNICAL SKILLS

**Front End** | React, JavaScript, TypeScript, HTML/CSS, styled-components

**Back End** | Python, Java, C/C++, SQL (postgres), MongoDB, Assembly, Flask

**Libraries & Developer Tools** | pandas, NumPy, Matplotlib, Microsoft Azure, Scikit-learn, Modal, Asyncio, Git, Figma

**Languages** | English (native), Mandarin (native)

## WORK EXPERIENCE

### OmniVision Technologies

Santa Clara, CA

*Data Algorithm Intern*

*May 2022 - Aug. 2022*

- Generated 15 LED light automobile video simulations and their corresponding binary maps in Blender. Partitioned data into 80-20 split for cross-validation with OpenCV.
- Created a classifier using PyTorch's neural network module with ReLU and fully connected layers, achieving (~93%) accuracy in identifying LED light sources.

## RESEARCH EXPERIENCE

### UC Berkeley EPIC Data Lab

Berkeley, CA

*HCI Research Apprentice, supervised by Professor [Aditya Parameswaran](#)*

*May 2024 - Present*

- Developing a conversational search interface using OpenAI Assistants API and React for a dataset retrieval system, enhancing user engagement through dynamic interaction.

*ML Research Apprentice, supervised by Professor Aditya Parameswaran*

*Sept. 2023 - May 2024*

- Assessed LLMs' ability to conduct feature selection for missing data imputation implicitly. Evaluated the performance of ChatGPT, KNN, and LogisticRegression models.
- Implemented batch calls for Hugging Face embeddings and parallelized seed runs on Modal's cloud functions, reducing computation time from 2 weeks to **6 hours**.

### UC Berkeley Cognition and Action Lab

Berkeley, CA

*Computational Research Apprentice, supervised by Professor Richard B. Ivry*

*May 2023 - Jan 2024*

- Engineered a predator-prey reinforcement model to simulate prey movements based on the predator's prior 3 locations to calculate acceleration and velocity. Visualized paths per timestep using Matplotlib.
- Streamlined the data transfer process by facilitating the integration of patient testing results into CognAc's database, encompassing (**1500+**) participants.

## PROJECTS

**HYSE** | *Python, React, TypeScript, Azure OpenAI (large language models), Flask, PostgreSQL*

- Executed an ELT pipeline using CKAN API for data extraction, storing datasets in PostgreSQL with pgvector.
- Leveraged Azure OpenAI function calling to provide clarification and dynamically generate personalized filter widgets for dataset searches. Utilized a sunburst chart for visual dataset organization and top-level exploration.

**Gitlet** | *Java*

- Designed and built a version-control system modeled after Git which allows users to track & commit file changes, revert to previous versions, create & merge branches, and implement remote features.