# Jason Lee

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# **Education**

University of California, Berkeley

Bachelor of Arts in Computer Science, EECS Honors Program

**Relevant Coursework:** 

CS 61B - Data Structures and Algorithms DATA 8 - Foundations of Data Science CS 70 - Discrete Math and Probability

CS 61C - Machine Structures CS 169A - Software Engineering

EECS 127 - Optimizations in Model Engineering

CS 61A - Structure & Interpretation of Computer Programs EECS 16A - Designing Information Devices and Systems

CS 170 - Efficient Algorithms & Intractable Problems

CS 188 - Artificial Intelligence CS 180 - Computer Vision

CS 189 - Machine Learning

# **Work Experience**

# **Cheating Detection Research**

Research Team Lead

**Jan 2024 - Present** Berkeley, CA

Aug 2021 - May 2025

GPA: 3.78/4.0

- · Worked with a team of 4 students under Professor Dan Garcia at UC Berkeley to create a cheating detection algorithm
- · Developed the algorithm which consisted of six rules that cross checked every pair of students for a given exam
- · Integrated the cheat detection algorithm into PrairieLearn, an educational platform, utilizing real student data

#### **Walmart Global Tech**

Jun 2024 - Aug 2024

Sunnyvale, CA

**Software Engineering Intern** 

- · Developed a dynamic shopper journey visualizer by analyzing data collected from the Walmart Spark Driver App
- · Collaborated with cross-functional teams to drive strategic initiatives, test new APIs, and support company growth
- · Led a project leveraged by Walmart leadership to inform strategic decisions on optimizing their delivery app structure

## Lab Assistant for CS 61A

Jan 2022 - Dec 2022

University of California, Berkeley Course Staff

Berkeley, CA

- $\cdot$  Taught weekly lab sections with ~40 students and hosted office hours to guide new students in projects and homework
- · Conducted one on one tutoring during class and created mini lectures as teaching material in lab sections
- · Mastered Java, Python, SQL, and educational pedagogy to provide an engaging academic experience for students

# **Projects**

# **HBSA Club Application** (*link*)

Jan 2024 - Present

- $\cdot$  Integrated a club application service into the Berkeley HBSA website with user accounts for more than 18 clubs
- · Created queries to combine response across multiple forms and a live application response sheet for club recruitment
- · Communicated with each organization to create a user friendly application process used by more than 2500 students

## Image Alignment and Colorization (link)

Aug 2024 - Sep 2024

- · Created an optimized image alignment algorithm using NCC and Gaussian pyramids for color image reconstruction
- · Implemented multi-core parallelism and vectorization to reduce image processing time from 10 to 1 minutes per image
- · Applied histogram equalization to enhance image contrast and canny edge detection for automatic cropping

# Convolution

Apr 2023 - May 2023

- · Coded a C program to convolve two 2-dimensional matrices and analyzed possible ways of optimizing code
- · Segmented runtime optimization into processes of loop-unrolling, SIMD, and MIMD while balancing overhead
- · Sped up runtime by at least 8.6 times when testing on a randomly generated large convolution calculation

# **Leadership Experience**

### **Vice President of Standards**

Dec 2022 - Present

**Berkeley Interfraternity Council** 

Berkelev, CA

- · Formed a diverse committee of nine members of Berkeley students in fraternities to promote healthy Greek life
- · Conducted Standards Board meetings to vote on subjects regarding Berkeley Greek life such as fraternity culture, growth of the student body, and public relations with the University

#### **Skills & Interests**

**Programming Languages:** Python · Java · Scheme · SQL · C++ · C · JavaScript · BigQuery

Tools and Frameworks: NumPy · Git · GitHub · JupyterLab · Node.js · React Native · PyTorch · NLTK · Scikit-learn

 $\cdot \operatorname{Circuit} \operatorname{Design} \cdot \operatorname{RISC-V} \cdot \operatorname{OpenMP}$ 

**Hobbies:** Climbing · Painting · Cooking · Skiing