**SUN AH LEE** 

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# education

UNIVERSITY OF CALIFORNIA, BERKELEY | class of 2021

Aug 2017 - present • Berkeley

Data Science, Computer Science • GPA: 3.41

Relevant coursework: Optimization Models\*, Algorithms, AI, Programming Fundamentals, Data Structures, Computer Architecture, Discrete Math and Probability Theory, Probability for Data Science\*, Linear Algebra

# experience

UC BERKELEY RISELab

June 2019 - present • Berkeley

Research Assistant (Supervisor: Dr. Joseph Gonzalez)

- Developed prototypes to improve Sketched-SGD, a distributed SGD algorithm that sends sketches rather than gradients for up to 40x communication cost reduction
- As of Aug 2019, implemented data structure using Pytorch that doubled preliminary (first round) test accuracy

#### BERKELEY CODEOLOGY

Jan 2019 - May 2019 • Berkeley

Project Leader

- Led two, 4-week projects for club members to learn how to build an online personal portfolio
- Designed lesson plans on relevant UX topics and web development technologies, such as JS and HTML/CSS
- Worked one-on-one with students and received mentorship from project managers to improve teaching process

### UC BERKELEY EECS DEPARTMENT; DIVISION OF DATA SCIENCE

Aug 2018 - present • Berkeley

Academic Intern for CS 70 and Data 100

- o Assist students at office hours 3+ hours a week for CS 70 (Discrete Math and Probability Theory) with 800+ students
- o For summer 2019, served as academic intern for Data 100 (Data Science Principles) for 5+ hours a week
- o Aim to help students think critically about content and assigned problem sets

### COMPUTER SCIENCE MENTORS (CSM)

Jan 2019 - May 2019 • Berkeley

Junior Mentor for CS 70

- Teach 1-hour long sessions twice a week to group of 4 students for discrete math pre-requisite
- Reinforce content with the use of mini lectures and problem-based worksheets
- Help students strengthen foundations to better approach more difficult concepts and problems

### THE DAILY CALIFORNIAN

Aug 2017 - May 2018 • Berkeley

Layout Designer

- Served daily student-run newspaper with readership of 35,000+ students, faculty and residents
- Layouted text and imagery on pages and collaborated on monthly creative spreads using Adobe InDesign, Ps, Ai

# projects

## HOMEBUDDY: FULL-STACK WEB APP (REACT, NODE.JS, FIREBASE)

Feb 2019 - May 2019 • Berkeley

- With a 4-person team, built an app that pairs users with "home buddies" to walk home safely from campus
- o On the front end team, developed the client-facing side using React, Google Maps API and HTML/CSS
- Created sign-up/sign-in functionality, fine-tuned the buddy matching algorithm and designed user-friendly interface

#### SHAPE FROM STEREO (C, SIMD, OPENMP)

Sept - Oct 2018 • Berkeley

- Created a program that simulates depth perception by generating a depth map from stereo images
- Optimized performance and increased speedup by 6x using parallelism techniques

## BEARMAPS (JAVA, INTELLIJ)

April 2018 • Berkeley

- Programmed a web-mapping application that outputs shortest path distances within Berkeley area
- Implemented rastering for correct tile selection and A\* algorithm to generate shortest distance between two locations

## EXPLORING DATASETS: MACHINE LEARNING APPLICATIONS (PYTHON)

April 2018 • Berkeley

- With a team, built linear regression and k-nearest neighbors models and applied to datasets from UCI repository
- Analyzed graphs created using matplotlib and submitted report for Data Science Applications Decal (INFO 98)

# skills

- LANGUAGES | Python, Java, C, HTML/CSS, JavaScript
  LIBRARIES & PROGRAMS | Pytorch, SQL, pandas, matplotlib, Tableau Adobe Creative Suite (Ps, Ai, Id, XD)
- o INTERESTS | General machine learning, CS theory, front-end development, UX design, photography