

# SAINAN(LILY) CHEN

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## EDUCATION

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### University of California, Berkeley

B.A. Computer Science; B.A. Statistics

*August 2019 - Expected May 2021*

Overall GPA: 3.95, Major GPA: 4.0

### University of California, San Diego

Major in Statistics, minor in Cognitive Science

*September 2017 - June 2019*

Overall GPA: 3.95, Major GPA: 4.0

### Selected Coursework

Efficient Algorithms, Database System, Computational Photography, Data Structure, Machine Learning  
Linear Modelling, Time Series, Stochastic Processes, Exploratory Data Analysis and Inference

## PROJECTS

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### Vision Correction Display

August 2020 - current

- Work as an Undergrad Research Apprentice with professor Brian Barsky.
- Focus on improving the existing projection algorithm for pinhole mask to enable people with vision aberration to see images clearly on a screen without physical lenses.

### Forecasting Outcomes of NCAA Womens Basketball Games (Python, R)

- Predicate winning probability and number of wins of teams using past competition data in various ways.
- Implemented Ratings Percentage Index algorithms to rate teams based on the winning percentage of the team and its opponents using Python.
- Used RPI to do logistic regression of winning probability and feature reduction in R.

### Factors of suicide (Python)

- Investigate relationships between suicide rate and gender, country, GDP and HDI to help effectively intervene and prevent suicidal behaviors.
- Analysed the relationship between suicide rate and GDP through scatter plots, linear regression and hypothesis tests in different dimensions using Python.

## TECHNICAL STRENGTHS

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### Coding languages

Java, Python, R, C, JavaScript, Matlab, SQL

### Tools

Git, Microsoft Office suite, Adobe Photoshop

## WORK EXPERIENCE

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### Discrete Mathematics and Probability Theory Grader

January 2020 - current

- 6 hours/week; class with 500+ students
- Held 2-hour office hour every week to assist students in course materials and assignments

### Software Engineer Intern at Box

May 2020 - August 2020

- Worked independently as a full-stack engineer on a proof of concept project called Function for 12 weeks. Function is a short-lived service created in Google Cloud Platform that is triggered by an HTTP endpoint
- Built Function page and added UI elements, e.g. file uploader and button, with interactive actions on it using JavaScript and React
- Created actions, including storing, retrieving, and deploying function related data by calling Google Client to create Google Functions, on the backend using PHP

### Applied Linear Algebra and Vector Calculus Grader

September 2018 - June 2019

- 12 hours/week; 150+ students every quarter
- Read and evaluated 10 papers per student per quarter in classes

### Data Analyst Intern at Yoozoo Games

June 2018 - September 2018

- Developed data sampling procedure to improve accuracy of the tests for junk-message-blocking-system and produced system documentation about it
- Developed algorithms to compile weekly reports to show the effectiveness of our system using SQL
- Helped implement A/B Testing of the system