Catherine **Huang**

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Education

University of California, Berkeley GPA: 3.9/4.0

B.S. in Computer Science and Applied Mathematics Expected Graduation: May 2022

- Computer Science: Information Theory and Coding*^, Machine Learning*, Computer Security*, Efficient Algorithms and Intractable Problems, Probability and Random Processes, Convex Optimization, Machine Structures, Data Structures, Discrete Math and Probability Theory, Structure and Interpretation of Computer Programs
- Math: Linear Algebra, Real Analysis, Abstract Algebra, Linear Algebra and Differential Equations, Multivariable Calculus
- Statistics: Theoretical Statistics*^

(* in progress, ^ graduate class)

Experience

Summer@ICERM REU Program Dr. Akil Narayan

Undergraduate Summer Research Fellow at ICERM June 2020 - July 2020

- Collaborated virtually and investigated connections between heat diffusion/wave propagation on graphs and graph spectral clustering algorithms.
- Read numerous papers in the field, gave biweekly presentations using Beamer slides, wrote a report, and created a website housing our progress.

UC Berkeley EECS Department

Undergraduate Student Instructor (uGSI/TA), Reader, Academic Intern Jan. 2019 - Present

- Course staff for Probability and Random Processes, Discrete Math and Probability Theory, Structure and Interpretation of Computer Programs.
- Wrote problems on midterms and finals, led 2 1-hour discussions weekly, and helped students understand course content, develop problem solving and debugging skills in office hours.

Extracurricular Activity

Undergraduate Theoretical Computer Science (UGTCS)

Vice President, Theorist's Toolkit Reading Group Organizer Aug. 2019 - Present

- Facilitated interactions between undergraduates and graduate students.
- Facilitated active group discussions on topics including probabilistic method, spectral graph theory, and algorithmic game theory.

Computer Science Mentors

Content Mentor, Junior Mentor Aug. 2019 - May 2020

- Created weekly worksheets vetted by course staff and used by 100+ students.
- Reorganized question database for seamless transition between teams.
- Led active weekly group discussions to supplement understanding. Students scored +1 std on midterms and finals.

Projects

Personal Website Developed a personal website and blog using HTML, CSS, and Jekyll.

Programming Languages

Advanced Python (NumPy, SciPy, PyTorch, Scikit, Matplotlib)

Intermediate Java, Go, C, LaTeX

Novice C++, HTML, CSS, Javascript