

# Andie Liu

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## EDUCATION

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### University of California, Berkeley

Berkeley, CA

*B.A in Computer Science; GPA: 4.00*

*Aug 2021 – May 2025 (Expected)*

**Relevant coursework:** Data Structures, Efficient Algorithms and Intractable Problems, Introduction to Digital Design and Integrated Circuits, ASIC Laboratory, Designing Information Devices and Systems I-II, Probability & Random Processes, Signals & Systems, Machine Structures, Foundations of Data Science

## EXPERIENCE

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### Knowledge-based news recommendation system: Haas School of Business

Berkeley, CA

*Research Assistant*

*May 2023 – Current*

- Use OpenAI API, Python libraries, clustering analysis, dynamic topic modeling, and Qualtrics to help design and implement a knowledge graph. Assist development of graph neural network models to personalize news recommendations with natural language processing principles. Improved processing by a 100x speedup.

### Computer Science Mentors

Berkeley, CA

*Teacher*

*Oct 2022 – May 2023*

- Taught 1-hour lessons on Discrete Mathematics & Probability Theory to 6 students twice a week. Delivered conceptual mini-lectures and supported students through worksheets and practice exam problems. Received consistent high reviews and positive feedback.

### Cognitive Science & Psychology Undergraduate Laboratory

Berkeley, CA

*Undergraduate Researcher*

*Aug 2021 – May 2022*

- Wrote paper examining existing literature on moral judgment. Used R language for linear regression and contrast coding. Regularly collaborated with graduate student mentors and fellow group members to present work at symposium.

### Blue & Gold Yearbook

Berkeley, CA

*Designer*

*Aug 2021 – Dec 2022*

- Created monthly page spreads featuring campus events integrating graphic design principles on Adobe InDesign, Photoshop, and Illustrator. Collaborated across copy, photo, and editing teams to perfect designs through revision and redesign.

### The Daily Californian

Berkeley, CA

*News reporter*

*Jun 2021 – Aug 2021*

- Interviewed, wrote, edited, and published breaking news stories online on events, research, and community of Berkeley within 24 hours of assignment. Published feature on City Council members on front page of print paper.

## PROJECTS

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### Voice-activated robot car

- Designed, built, and debugged elements such as DAC, ADC, motor-controller circuits, speed sensors, mic board and regulators, and bandpass filters. Experimented with machine learning concepts, PCA, controls, and testing in Python and C. Troubleshoot hardware with oscilloscope, multimeter, function generator, working with two other group members.

### New York Times Wordle Bot | *GitHub*

- Used probabilistic entropy and object oriented programming to suggest optimal words to solve the Wordle at an average of 3.5 guesses per word, comparable to NYT's own bot and better than a human player.

### CPU Design

- Built the entire datapath for all types of RISC-V instructions. Implemented a 2-stage pipeline.

## SKILLS

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**Programming:** C, Java, Python, Verilog, Javascript, HTML, CSS, React, SQL, R

**Technologies/Libraries:** Git, NumPy, JUnit, Arduino, SkyWater 130nm, OpenAI, OpenMPI, OpenMP

**Languages:** English (Native), Chinese (Professional)