

LULU YU

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EDUCATION

University of California, Berkeley

Expected Graduation: May 2022

Bachelor of Arts in Computer Science, Data Science

Relevant Coursework: Data Structures, Principles and Techniques of Data Science, Structure and Interpretation of Computer Programs, Designing Information Devices and Systems, Multivariable Calculus, Discrete Math and Probability

EXPERIENCE

Generate Good — *C#, MySQL, HTML/CSS*

November 2020 - Present

Software Development Intern

Remote - San Diego, CA

- ▶ Developed platform's database and core functionalities using MySQL and C#: post dashboard, user creation
- ▶ Implemented front end of generategood.co's user interface using HTML/CSS with the Bootstrap library
- ▶ Developed supplemental features on the web platform: blocking and reporting users and social news feed

theCoderSchool — *Java, Python, HTML/CSS*

October 2020 - Present

Computer Science Tutor

Remote - Berkeley, CA

- ▶ Taught students the fundamentals of programming, problem solving, and algorithm design using a project based approach; developed personalized curriculums tailored to individual learning goals and skill levels
 - ▶ Guided students through building their own applications using Java, Python, Scratch, and HTML/CSS
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PROJECTS

2D World Generator — *Java*

November 2020

- ▶ Developed an engine that generates pseudorandom 2-dimensional worlds using the StdDraw library in Java
- ▶ Created an interactive one-player avatar movement system controlled by keyboard input to explore the generated worlds and interact in-game; generated worlds were designed as connected hallways and rooms
- ▶ Used create and write to files to implement persistence for save and load functions for user-entered seeds

Bear Maps — *Java*

November 2020

- ▶ Implemented shortest-path search using the A* algorithm along with dynamic zoom and scroll functionality
- ▶ Performed image rasterization to render a full map of UC Berkeley by searching and stitching image files
- ▶ Rendered map images to display routing and respond to scrolling and zooming, similar to Google Maps
- ▶ Utilized a trie data structure for autocomplete search implementation and trees to store map image data

Retro Arcade Machine — *Lua*

April 2020

- ▶ Programmed traditional retro games Pac-Man, Snake, Pong, and a custom street fighter inspired game with multiplayer functionality for a custom designed 3' x 4.5' wooden Retro Arcade Machine
 - ▶ Designed algorithm for ghosts to chase Pac-Man and implemented physics for ball collision in Pong
 - ▶ Designed player selection, help menu, and game over screen on Figma in the traditional pixelated retro style
 - ▶ Games integrated on a Raspberry Pi 4 in programming language Lua using the Love framework
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ORGANIZATIONS

Cal Mentors — *Algebra Mentor*

September 2020 - Present

- ▶ Virtually tutored a small group of disproportionately impacted students from San Leandro High every week to support them academically and help them transition to virtual learning with personalized curriculums

Theta Tau Professional Engineering Fraternity — *Philanthropy Chair*

January 2020 - Present

- ▶ Organized partnerships with the Himmati Foundation to provide free PPE to Berkeley homeless shelters and UC Berkeley's ONETrack International chapter to fundraise donations to alleviate the global orphan crisis
 - ▶ Planned Letter Event to mail 50+ handwritten letters to essential workers, kids in hospitals, and the elderly
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SKILLS, HOBBIES

Technical Languages & Technologies: Java, Python, SQL, HTML/CSS, C#, Git, IntelliJ, NumPy, Figma, LaTeX

Spoken Languages: English (fluent), Mandarin Chinese (conversationally fluent)

Hobbies: Playing badminton, raising houseplants, daily journaling, painting, and making future travel plans