ISABELLA WU

(669) 350-7095 | izziebelly@berkeley.edu | linkedin.com/in/ibellawu

EDUCATION

University of California, Berkeley Graduation: May 2023
B.A. Computer Science Cumulative GPA: 3.3
Coursework: Algorithms, Foundations of Data Science, Discrete Math and Probability Theory
Awards: International Music Competition Salzburg "Grand Prize Virtuoso", USMIC Stanford Competition

PROGRAMMING EXPERIENCE

Structure and Interpretation of Computer Programs (CS 61A)
Python Summer 2020

- Scheme Project: coded a Scheme interpreter that tokenized, evaluated, and compiled various inputs in Python
- Ants: used Object-Oriented Programming to code game avatar's abilities in a Plant vs Zombie-like game
- Cats: coded a typeracer game with auto-correct abilities in Python

Great Ideas in Computer Architecture (CS 61C)
C Summer 2021

- NumC: implemented a new rendition of NumPy, a useful Python library for performing mathematical and logical operations on arrays and matrices
- CS61CPU: wired ALU and RegFile for a standard RISC-V CPU and completed CPU datapath for executing addi instructions to implement a working CPU that runs actual RISC-V instructions

PROJECTS

2D World Generator
Java Fall 2020

- Developed an engine that generates pseudo random 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 Fall 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

Modular LED Table
Arduino/C++ Fall 2021

- Constructed a table from scratch using plywood and aligned LED lights into a grid created from styrofoam
- Designed color scheme and hand painted the centerpiece for the table
- Utilized C++ using Arduino to code the LED lights to display different animations and reactive to sound

ORGANIZATIONS

Key Club **San Jose, California**
President Sept. 2018-Jun. 2020

- Oversaw a campus service organization of 50+ students and leadership team of 6 officers to generate 600+ hours of community service
- Organized annual fundraiser campaign for the Pediatric Trauma Program, including events like boba fundraisers, car washes, and selling merchandise; raising over $1000+ in donations
- Designed and managed official club website using Wix and served as a delegate at the District Convention

SKILLS/INTERESTS

Skills: Python, Java, C/C++/C#, SQL, Scheme, NumPy, Git, Jupyter Notebook, Circuit Design, Adobe Creative Suite
Interests: Tennis, Piano, Running & Hiking, Painting, Photography & Photo Editing, Healthcare Accessibility, Valorant