Rosemary Ting

Arcadia, CA || Berkeley, CA
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Education

University of California, Berkeley **Expected: Fall 2024**

Bachelor of Arts in Computer Science, Minor in Data Science

Relevant Coursework: Multivariable Calculus, Linear Algebra and Differential Equations, The Foundations of Data Science, Structure and Interpretation of Computer Programs, Data Structures, Principles & Techniques of Data Science, Discrete Mathematics and Probability Theory (IP)

Work Experience

Junior Mentor **January 2023 - Present**

Computer Science Mentors (CSM) *Berkeley, CA*

- Junior Mentor for CS 61B course (Data Structures) with responsibilities in directing and leading weekly tutoring sections with 4-5 students to reinforce data structure concepts
- Plan weekly lessons and provide educational worksheets to supplement course work
- Teaching topics include Data Structures, Graph Algorithms, Sorting Algorithms, and Asymptotic Analysis

Academic Intern **August 2022 – December 2022**

UC Berkeley Electrical Engineering & Computer Sciences (EECS) *Berkeley, CA*

- Academic Intern for "Structure and Interpretation of Computer Programs" (CS61A) within the EECS Department
- Collaborate with the course teaching assistants to run weekly lab sessions in assisting more than 30 students with debugging and conceptual Python programming ideas
- Provide guidance for course materials and projects regarding topics such as Higher-Order Functions, Recursive and Tree Recursive Calls, Object-Oriented Programming, Sequences and Mutability, Iterators and Generators, Linked Lists and Trees, SQL, Tail Calls, and the Scheme Programming Language

Math Tutor **January 2019 – February 2022**

Tutor *Arcadia, CA*

- Held private tutoring for high school students on a one-on-one basis to approach mathematical concepts and course materials in a reinforcing and comprehensible manner every week for Pre-Algebra, Algebra 1, and Geometry

Projects

Build Your Own World | *Java*

- Implemented a 2D tile-based world exploration engine that can generate varying pseudo-random worlds and support graphic rendering using Java's StdDraw library
- Created an interactive system determined by keyboard input for starting a new game, player movement, and saving and loading game progress to persist worlds between game sessions
- Generated an enemy character through implementations of path-finding that will pursue game character using shortest path algorithms

NGordnet | *Java*

- Developed web-browser based tools that explore the history of English word usage similar to the Google Ngram Viewer and WordNet dataset
- Graphically charts and textually displays the relative frequency of the input word usage between given years by calculating annual word frequency corresponding to total word count; displays all subsequent and intersecting hyponyms given multiple user-inputted hypernyms sorted in relative popularity between given years
- Generated through the implementation of Mapping and Graphical Traversals to associate given words to a mapping of relevant years and total appearances for each word

Scheme Interpreter | *Python*

- Constructed an interpreter for a subset of the Scheme programming language as a dialect of Lisp
- Executed various Scheme procedures and special syntax forms using expression evaluators that redirect Scheme symbol evaluation to appropriate function calls
- Allowed for tail optimizations to ensure recursive calls use constant stack space with implementations of the trampolining technique in Python

Ants vs. Somebees | *Python*

- Created tower defense strategy game similar to "Plants Vs. Zombies" with object-oriented paradigms
- Constructed turn-based strategies and respective health-deducting/shielding actions for various defending "Ant" and attacking "Bee" objects with the objective of protecting the "Ant" base from invasion
- Utilized class inheritance and method lookup while implementing distinct instance and class attributes

Technical Skills

Programming Languages: Java, Python, SQL, Scheme, JavaScript, HTML/CSS
Tools: Git, NumPy, LaTeX, Pandas