# Tamara Star Vilaythong

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## Education

- **University of California, Berkeley** *GPA: 3.56*
  *Bachelor of Arts, Computer Science/Data Science* *Expected Graduation 2021*

## Highlighted Projects - *Email for Bitbucket repository*

**Personal Website (*HTML & CSS*):**

- Designed and developed personal website from scratch using HTML, CSS, JavaScript, jQuery, and Bootstrap

**Bear Maps (*Java*):**

- Google Maps inspired web-based routing application. Implemented the **back end** for the mapping and routing of Berkeley by using existing front end and OpenStreetMap mapping data
- Developed map rastering, zoom functionality, and clicking for location selection
- Used a SAX parser with an OSM XML data file to build a graph representation of the Berkeley area, and applied **A* algorithm** with the graph representation to implement shortest-path routing

**2D Tile Game (*Java*):**

- Designed and developed two-player keyboard game from scratch with provided TileEngine Renderer
- Utilized arrays and **pseudorandom number generator** for the world generation seed/layout
- Incorporated StdDraw and Serializable for the game UI behavior

**Linked List Deque and Array Deque (*Java*):**

- Implemented a deque data structure for both linked lists and arrays using **IntelliJ IDE**
- Provided **JUnit tests** to support correct implementations of the deques
- Improved access to the front and ends of lists in O(1), and ensured efficient memory allocation by reducing or increasing the size of an Array Deque when the usage ratio was less than 0.25

## Experience

**Data 8 Course Staff Tutor** *August 2018 – Present*

- *UC Berkeley Department of EECS – Berkeley, CA*
  - Instruct two small group tutoring sections for an introductory data science class of 1300 students
  - Assist students in office hours and on Piazza for questions about Python-based homework and projects

**CS 61A and Data 8 Lab Assistant** *January 2018 – August 2018*

- *UC Berkeley Department of EECS – Berkeley, CA*
  - Assisted students in learning material covered in introductory computer science and foundational data science classes, including data analysis and foundations of machine learning 6.5 hours a week

## Related Coursework

- **STAT C100:** Principles and Techniques of Data Science (Fall 2018)
- **CS 61C:** Machine Structures (Fall 2018)
- **CS 70:** Discrete Mathematics and Probability Theory
- **CS 61B:** Data Structures
- **STAT C8:** Foundations of Data Science
- **Math 54:** Linear Algebra and Differential Equations
- **EE 16A:** Designing Information Devices and Systems I
- **CS 61A:** Structure and Interpretation of Computer Programs

## Skills

- **Highly Skilled:** Java, Python
- **Familiar:** C, HTML, CSS, Scheme, SQL
- **Platforms:** Git, Bitbucket, Vim, IntelliJ IDE, Sublime

## Leadership and Extracurricular Activities

- **Association of Women in EECS:** Member (UC Berkeley)
- **Rewriting the Code Fellowship:** Fellow
- **Sharp Hospital Volunteer:** Guest Ambassador and Surgical Intensive Care Unit (223 Hours in San Diego)