

# Tamara Star Vilaythong

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## Education

- **University of California, Berkeley**  
*Bachelor of Arts, Computer Science/Data Science*

GPA: 3.56  
Expected Graduation 2021

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## 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 deque
  - 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
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## 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.
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## Related Coursework

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

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