

Tamara Star Vilaythong

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Education

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

GPA: 3.551
Expected Graduation 2021

Highlighted Projects

Pintos Operating System (C, OS):

- Implemented user program support, system call interface, priority thread scheduling, and cached file system of the Pintos Operating System in a team of 4.

Database (Java):

- Implemented a B+ tree for dynamic multilevel database file indexing, iterators, join algorithms, cost estimation, query optimization, and concurrency lock manager for an SQL relational database.

Personal Website (HTML, CSS): *tamvilaythong.github.io*

- 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

VR Bowling Hackathon Project (C#):

- Created a VR Bowling Game at SodaHacks 2018 in a team of 4 with a top 8 finish
 - Used **Unity 3D** with Oculus Integration and C#
 - Contributed to the VR testing and developed the game environment/setting
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Experience

Data 8 Head Undergraduate Student Instructor

January 2019 – Present

- *UC Berkeley Department of EECS – Berkeley, CA*
 - Instruct a lab section of around 30 students for an introductory data science class of 1500 students
 - In charge of content and infrastructure by creating and building the homework, and maintaining the course website.
 - Hold office hours and assist students on Piazza for questions about Python-based homework and projects, and grade midterms and finals

Software Engineer Intern

May 2019 – August 2019

- *Northrop Grumman Corporation – San Diego, CA*
 - A team member of the '524' project which is a derivative of the BACN project
 - Developed unit tests and a text parser for aircraft messages
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Related Coursework

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| - CS 161: Computer Security (In Progress) | - CS 61C: Machine Structures |
| - CS 162: Operating Systems and Systems Programming | - CS 70: Discrete Mathematics and Probability Theory |
| - CS 188: Artificial Intelligence | - CS 61B: Data Structures |
| - CS 170: Efficient Algorithms and Intractable Problems | - STAT C8: Foundations of Data Science |
| - CS W186: Introduction to Database Systems | - EE 16A: Designing Information Devices and Systems I |
| - STAT C100: Principles and Techniques of Data Science | - CS 61A: Structure and Interpretation of Computer Programs |
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Skills

- **Highly Skilled:** Python, C, Java
- **Familiar:** C#, HTML, CSS, Scheme, SQLite
- **Platforms:** Git, Bitbucket, Vim, Docker, IntelliJ IDE, Microsoft Office, Sublime