

Phillip Ly

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Education

University of California, Berkeley

Berkeley, CA

Bachelor's of Arts, Economics with Minor in Data Science

Aug 2019 – Dec 2021

Coursework: Data Structures, Computer Architecture, Efficient Algorithms, Data Science, Databases, Discrete Math, Statistics/Probability, Econometrics, Full-Stack Development, User Interface Design and Development

Ohlone Community College

Aug 2016 – May 2019 Fremont, CA

Experience

UC Berkeley – Data 100 Staff

Berkeley, CA

Academic Intern

Sept 2021 – Dec 2021

- Prepared and provided students advice concerning homework assignments, projects, and labs through Piazza.
- Assisted students with bugs on Jupyter **Python/Pandas** environment through Piazza.
- Assisted course staff in weekly online discussion sections with 20+ students on course material and led walk-throughs on practice problems.

Projects

Frontend Hiking Trail Site (CalTrails) [Demo](#)

- Developed a web application that allows users to find hiking trails using reusable components with **React**.
- Integrated travel companion with **Google Maps API** that fetches API data (trail/weather) based on users' latitude/longitude .
- Improved site through UI/UX design principles, clustering of trails through location search/autocomplete, and flexible functionality for ensuring user authentication identity using **Auth0**.
- Created and consumed **REST APIs** for storage of user-favorited hikes using **Nodejs/MongoDB**.

Flower Power (2D-tile based game) [Code](#)

- Created a dungeon-based game where the player's main goal to go through the randomly generated maze and collect randomly generated flowers developed using **Java**.
- Optimized efficiency for connecting rooms through concepts of pathfinding algorithm for minimum distance.
- Utilized object-oriented programming to represent characteristics of different types of rooms and behavior. Room location stored so that rooms are not rendered on top of previous rooms to prevent unreachable locations.
- Included player interactivity with world using keyboard input and UI elements for informative/immersive gameplay.

Gitlet [Code](#)

- Implemented a custom version control system that mimics git's storage system such as tracking and committing file changes, merging, branching and status using **Java**.
- Integrated various data structures to allow for efficient search and runtime.
- Utilized deterministic data structures for maintaining ordered commit information.

Skills

Languages: Python, Java, HTML/CSS, JavaScript (React), SQL, R, Stata,

Frameworks: React, MaterialUI, Bootstrap, NodeJS, ExpressJS, MongoDB, MySQL, NumPy, Pandas, Seaborn, Matplotlib

Tools: Git/Github, Postman, Vercel, Figma, Latex

Leadership

Circle K International at Berkeley

Berkeley, CA

Public Relations Committee Chair

Sept 2020 – May 2021

- Organized 4 large interclub virtual socials with over 30 attendees, and welcome week activities resulting in 20 new members.
- Held virtual service events such as constructing origami cranes for cancer patients, raising over \$150 for charity.