

# Phillip Ly

Fremont, CA | (510) 565-5821 | philly79@berkeley.edu  
github.com/Pillbug23 | philliply-tech.vercel.app | linkedin.com/in/phillip-ly

## Education

### University of California, Berkeley

Bachelor of Arts, Economics with Minor in Data Science

Berkeley, CA

Dec 2021

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

## Experience

### UC Berkeley – Data 100 Staff

Academic Intern

Berkeley, CA

Sept 2021 – Dec 2021

- Advised a teaching forum with 500+ students advice on projects and labs concerning data collection, sampling, data modeling, and techniques for scalable data processing
- Assisted students with data visualization tools and bugs on Jupyter Python/Pandas environment
- Hosted discussion groups on data science concepts, Python programming concepts, SQL, Pandas, and data visualization libraries

## Projects

### Hiking Trail Finder (CalTrails) | MongoDB, Express, React, Node, MaterialUI, Git

- Developed a web application on a MERN stack that allows users to find hiking trails near their location
- Integrated interactive map UI with Google Maps API to fetch trail/weather API data based on user location
- Lowered search times by clustering trails with location auto-complete and filtering trails based on distance
- Utilized flexible functionality of Auth0 to authenticate sessions and securely access user data
- Created and consumed REST APIs for storage of user-favorited hikes using Node.js and NoSQL document store

### Flower Power (2D-tile based game) | Java, Git

- Created a dungeon-based game wherein the player must navigate a randomly-generated maze and collect flowers
- Utilized object oriented programming to track room coordinate position, width, and height to prevent room collision and rendering of tiles over another room
- Optimized efficiency for connecting rooms through concepts of Dijkstra's pathfinding algorithm for minimum distance

### Gitlet | Java, Git

- Implemented a custom version control system that mimics Git's storage system, with features such as adding and removing files, tracking and committing file changes, merging, branching and displaying status
- Integrated various data structures enabling efficient search and runtime
- Utilized deterministic data structures for maintaining persistence of object information storage and commit order

## Skills

**Languages:** JavaScript, HTML, CSS, Python, Java, SQL, R

**Frameworks and Databases:** React.js, MaterialUI, Bootstrap, Node.js, MongoDB, MySQL, NumPy, Pandas, Seaborn

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

## Activities

### Circle K International at Berkeley

Public Relations Chair

Berkeley, CA

Sept 2020 – May 2021

- Planned interclub service events, welcome week activities and an alumni panel resulting in 20+ new members
- Raised over \$150 for charity by organizing virtual services events for cancer patients