

Cheng-Ying (Marvin) Hsin

Mobile: (215)934-2645 | Email: bdfb1997@berkeley.edu | Website: <https://marvinhsin.github.io/portfolio/>

EDUCATION

University of California-Berkeley, CA

Sep 2021 – Present

Bachelor of Arts in Computer Science, minor in Data Science – GPA 3.70/4.0.

Foothill College, CA

Sep 2018 - June 2021

Associate Degree in Computer Science – GPA 3.95/4.0

Relevant Coursework:

Object-Oriented Analysis and Design (4yrs **C++**, 3yrs **Java**, 4yrs **Python**), Data Structures and Algorithms, Software Engineering, Computer Architectures, Operating Systems, System Programming, Embedded System, Computer Security, TCP/IP, AI/ML

HIGHLIGHTED PROJECTS

Pacman – AI Agent in Python, UC Berkeley

Fall 2022

- Utilized 10+ search algorithms such as **DFS**, **BFS** to find optimal solutions to different search problems.
- Applied 5+ machine learning models such as **Q-Learning**, **Neural Network** to train the agent to score optimally given different environments.
- Achieved 98% accuracy on classifications and 90% winning rate of games.

PintOS in C, UC Berkeley

Fall 2022

- Built a uniprocessor **operating system** in **C** and Assembly Language supporting multithreading.
- Designed and implemented kernel modules including multithreads management, user programs management and virtual memory module.
- Supported 15+ syscalls, floating point operation and file system operations with strict priority scheduler.

End-to-End Encrypted File Sharing System in Go, UC Berkeley

Spring 2023

- Built a secure file sharing system like Dropbox in **Go** with knowledge of cryptography.
- Designed the user login system and secure file sharing process and implemented 8+ relevant client APIs.
- Applied efficient **data structures** to improve the file sharing, overwriting, appending, uploading and downloading processes to optimize performance efficiency and bandwidth usage.

Gitlet in Java, UC Berkeley

Spring 2022

- Built a **version control system** that simulates Git in **Java** from scratch to 1500+ lines of codes.
- Supported 13 essential git commands such as add, commit, status, checkout, log, branch, and merge.
- Designed customized method *find* to search versions with certain keyword over all committed messages.

EXPERIENCE

RRR computer organization, CA

July 2019 – Aug 2019

Full Stack Engineer Internship

- Leveraged **Google Analytics** to track and analyze user behavior for over 1,000+ web browsers and revamped website layout and architecture for improved user experience, combining **HTML**, **CSS**, and **JavaScript**.
- Established a **SQL** database system to link and manage information from individual computer donors.

CERTIFICATES

AWS Certified Cloud Practitioner, AWS, July 2023

TECHNICAL SKILLS & INTERESTS

Languages: Python, C, Java, C++, SQL, React, Ruby, Node.js, RISC-V, Scheme, HTML/CSS, C#, JavaScript, R
Libraries/Framework: Git, NumPy, SIMD, TensorFlow, PyTorch, Pandas, AWS, Agile, RESTful, CI/CD