Calvin Pham

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Education

University of California, Berkeley   May 2022
Bachelor of Arts in Computer Science   GPA: 3.51

Relevant Coursework: Algorithms, Artificial Intelligence, Computer Graphics & Imaging, Computer Programs, Computer Security, Data Structures, Database Systems, Discrete Mathematics & Probability Theory, Machine Structures, Operating Systems, User Interface Design & Development

Experience

Software Engineering Tutor, Freelance — San Jose, CA   Aug 2022 — Present
- Teach students software engineering and the fundamentals of Python and OOP design
- Mentor students in mastering problem-solving strategies for technical coding interviews, provide code analysis, debugging and guidance on a wide variety of software engineering subjects

Software Engineer, Pioneers in Engineering Club — Berkeley, CA   Sept 2019 — Dec 2019
- Maintained C/C++ API code responsible for RC robot functionality, including a 500% improvement in latency for the communication handler
- Attended stand-ups and meetings discussing optimizations and additional features for the RC robot and for club logistics relating to hosting high school STEM competitions

Projects

Cryptographic File Sharing System | Golang
- Designed and developed an efficient multi-user, concurrency supported, secure file saving and sharing system, and conducted comprehensive unit, integration, and security testing
- Supports confidentiality, integrity, and authenticity of user account data and files through public, private, and symmetric key encryption, HMAC, AES-CTR block chaining, and hashing

Pintos Operating System | C
- Designed and implemented Pintos, supporting various features to a basic operating system
- Features include a concurrency-supported LRU buffer cache made for an Inode-based file system, priority scheduling using a complex priority donation algorithm, user program multi-threading, and process spawning and waiting with other various system calls

Gitlet | Java
- Devised and built a fully functioning local file version control system that mimics the key features of Git including branching, committing, pushing, initing and merging
- Utilized OOP, serialization, and JUnit in order to support and test the functionality of these features

Go Motivation | HTML/CSS, JavaScript
- Leadership role in the team development of a full stack web application that helps motivate users to accomplish their fitness goals through a calendar API and achievement system
- Utilized the full UI/UX design development process, including A/B testing, and wire-framing, to cater front-end and back-end development towards a specific focus group

Technical Skills

Languages: C, C++, CSS, Golang, HTML, Java, JavaScript, Python, RISC-V, SQL, Swift, and SwiftUI
Tools: Git, GDB, Mockito, JUnit, NumPy, MongoDB, Docker, make, MySQL, Amazon Web Services
Certifications: AWS Cloud Practitioner