Jeromy Lui

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OBJECTIVE

Interested in a software developing/engineering intern position involving back-end development in the Spring.

EDUCATION

University of California, Berkeley, CA | August 2015 - May 2019 (Expected)
Bachelor of Arts in Computer Science, a fourth-year student
Awards and Honors: Sigma Alpha Pi: National Society of Leadership and Success
    Relevant Coursework: CS186: Database Systems | CS168: Networking| CS162: Operating Systems
        CS170: Algorithms | CS188: Artificial Intelligence | CS161: Computer Security
    College GPA: 3.4
James Logan High School, Union City, CA | Fall 2011 - Spring 2015

TECHNICAL SKILLS

1. Programming Languages: Java, Python, C, SQL, Scheme (Lisp), Assembly (MIPS), JavaScript, HTML, and CSS.
2. Other Technologies: Windows, Unix (Mac), Linux (Ubuntu), Git, MySql, gdb, Angular-CLI, MS Office Suite.

WORK EXPERIENCE

AT&T, San Ramon | Software Developer Intern   Summer 2018
- Developed a dashboard that visualizes and analyzes data from AT&T's troubling shooting chat.
- Worked on the processing of large amounts of chat data and the automation of data analysis.

Breakout Mentors, Berkeley | Computer Science Tutor   Spring 2018 - Present
- Walk high schoolers through developing Java projects and helping them implement creative project ideas.
- Explain computer science concepts to students and answer their questions.

University of California, Berkeley | ANOVA Site Leader   Fall 2016 - Spring 2017
- Visited Berkeley High School weekly to teach high schoolers Java concepts/syntax.
- Lead the classroom in instruction and managed 2-3 other teaching assistants.

MAJOR PROJECTS

Secure File Storage Client, Python
- Built a file storage client that can securely upload, download, share, revoke, and update files on a malicious server.
- Used SHA256, RSA signatures, MACs, and encryption algorithms such as El Gamal, CBC, and CTR to ensure security.
- Implemented Merkel trees and caching to improve efficiency when handling large amounts of data.

Chat, Python
- Built an application that connects multiple clients over a network channel to communicate.
- Handled partial messages by buffering, allowing messages belonging to multiple clients to be interleaved.
- Learned about socket programming API and use, such as non-bloating sockets and client functionality.

Fully-Operational Operating System, C
- Designed and implemented an operating system over the Pintos operating system.
- Implemented thread priority schedulers, process/file syscalls, a buffer cache, extensible files, and subdirectories.
- Handles synchronization using locks, semaphores, and monitors, allowing threads to share resources.

Databases, Java
- Coded B+ trees with bulk loading, join/sort algorithms (simple nested loop joins, page nested loop joins, block nested loop joins, sort-merge join, external merge sort), a query optimizer, and a lock manager to handle multiple transactions.

Pacman-AI, Python
- Incorporated Bayesian Learning, Inference, Update, along with Q-Learning tactics to build an intelligent agent.
- Adapted classic search algorithms including iterative deepening, A* search, BFS, and DFS to optimize searches.
- Worked with least-squares regression, stochastic gradient descent, as well as binary classification.