

Alex Kazorian

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Education

University of California, Berkeley

2015 - May 2019

B.A in Computer Science

Relevant Coursework:

- Graduate Cryptography
- Advanced Graduate Cryptography
- Operating Systems
- Graduate Operating Systems (In Progress)
- Computer Security
- Algorithms
- Artificial Intelligence
- Data Structures
- Discrete Math and Probability
- Computer Architecture
- Intro to Circuits
- Abstract Algebra (In Progress)

Experience

SCIPR-Lab

February 2018 - Present

Research Assistant

- Currently working with Professor Alessandro Chiesa on modifying and implementing various subroutines and cryptographic protocols in C++ used in a succinct, non-interactive, zero knowledge proof library based on research published by members of the lab.

UC Berkeley

August 2018 - Present

Operating Systems: Undergraduate Student Instructor

- Designed and QA'ed course content relating to Operating System concepts including concurrency, virtual memory and caching, and persistent storage.
- Managed and led 8 project groups consisting of 4 students each through the process of designing and implementing large scale changes to the Pintos operating system by holding design review sessions.
- Led discussion sections and office hours to help enforce foundational operating system concepts along with proper coding and debugging practices.

UC Berkeley

June - August 2017, January - August 2018

Data Structures: Undergraduate Student Instructor

- Responsible for teaching and leading daily lab sessions on course topics including Java programming methodology, data structures, and sorting and graph algorithms.
- Contributed to revamping and QA'ing labs, projects, and various other course related content.

Projects

TMOSS Based Cheating Detection

- Applied knowledge of file systems and the Github API to manage and organize student repositories for a course on a remote server that runs cheating detection software based on Temporal Measure of Software Similarity (TMOSS). Research code that was used can be found [here](#).

Research Project

UC Berkeley, Advanced Graduate Cryptography

- Attempted to complete the proof of security of Lu and Ostrovsky's first garbled RAM protocol from Non-Standard cryptographic assumptions.

NP-Hard Approximation

UC Berkeley, Algorithms

- Devised an NP-Hard approximation algorithm for a problem that is the combination of Knapsack and Independent set. More concretely, the problem statement requires filling up a Knapsack with items that do not violate any constraints given as input.
- Algorithm utilizes a mix of greedy search, randomization, gradient descent, and linear programming to optimize the solution for problem instances that are 4GB large in size.

Secure File Sharing System

UC Berkeley, Computer Security

- Implemented a secure file sharing and storage system using Go and third-party cryptographic libraries.
- Functionality includes secure user authentication, file creation, editing, and sharing with other users on a server that cannot be trusted all the while guaranteeing confidentiality and integrity of user and file data.

Technical Skills

Languages: Java, Python, C, C++, Go.

Misc. Skills: Make, CMake, Git, UNIX, LaTeX.