Keahooi Hung

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EDUCATION

University of California, Berkeley *(Expected grad: May 2021)*
BS, Electrical Engineering & Computer Sciences | **GPA: 3.92**

EXPERIENCE

Software Engineering Intern *(May 2020—Aug 2020)*
Confluent

- Designed and Implemented Role-Based Access Control CRUD functionality for the Go-based Confluent Cloud CLI for production usage
- Worked alongside a team of Senior engineers, participated in design reviews, sprint planning, scrum meetings, and commit review process for the mission critical Confluent Cloud RBAC Project
- Utilized Jenkins CI to automate both SDK generation and PR creation, improving developer productivity by 5 minutes/commit
- Investigated and created a runbook for Disaster Recovery with RDS Postgres Databases

Undergraduate Student Instructor *(Jan 2020—May 2020)*
UC Berkeley EECS Department

- Led a weekly discussion section for around 30 students
- Developed critical course material (e.g. exam questions, project material) for the Computer Security course at Berkeley

SKILLS

Python | Java | C/C++ | Go | Git | SQL | RISC | MATLAB | Numpy/Scipy | Jupyter | Jenkins | Bash | Verilog

HONORS

- Eta Kappa Nu
- Tau Beta Pi
- Dean's List (2018)
- Eagle Scout

COURSEWORK

- Algorithms
- Data Structures
- Database Systems
- Computer Architecture
- Operating Systems
- Computer Security
- Machine Learning
- Internet Architecture
- Compilers
- DSP

PROJECTS

Secure File Storage

- Designed and implemented a system to securely store, share, and verify files to a malicious datastore
- Utilized RSA, AES-CBC encryption along with user salts and HMAC to conceal user information
- Exploited list-based data structures for efficient append operations

GIF compression

- Devised a wavelet transform based compression algorithm which applied downsampling, differencing, quantization and RLE, to achieve a compression ratio of 20 (and PSNR of 27) for certain GIFs

INVOLVEMENT

Institute of Electrical and Electronics Engineers (IEEE) *(Jan 2018—present)*
Micromouse Committee

- **Decal**: Designed a small robot that closely followed a given wall by implementing a closed loop PID control system with a team of 4 people over the course of a semester-long Decal (student led class).
- **Director**: Leading an 8-person officer team, developing core curriculum, and managing logistics for the class of 40 students taking the Decal this semester.

UC Berkeley Human Powered Vehicle Team *(Aug 2017—May 2018)*
Electrical Sub-Team

- **ABS**: Improved brake actuation and reduced braking distance of the team vehicle by designing and testing Arduino microcontroller code, which implemented an electrical anti-lock braking system by gathering and analyzing data from an on-board accelerometer.
- **Parking Brake**: Added a parking brake feature to the team vehicle by designing and testing Arduino microcontroller code which utilized sampled data from the brake servo.