BOB FENG

bjfeng@berkeley.edu | (909) 282-2498 | 2310 Fulton Street, Berkeley, CA 94704 | bob-feng.com

Education

UNIVERSITY OF CALIFORNIA, BERKELEY *Class of 2019 (Junior)*

B.A. Computer Science

Relevant coursework:

- UI & UX (Html, CSS, JavaScript, jQuery)
- Security & Operating Systems (Python, C)
- Discrete Math, Algorithms, & Probability
- Graphics & Computer Vision (C, C++)
- Database Management Systems (Java, SQL)
- AI & Machine Learning (Python)

Projects

Security *Spring 2018*

Secure File Systems

- Designed a filesystem that ensures confidentiality, integrity, and authenticity using CBC-AES symmetric key and el Gamal asymmetric key encryption as well as MAC and RSA for signatures respectively.
- Enabled a sharing and revoking feature in the filesystem through a distributed security layout that prevent malicious agents from accessing any information being transferred.

Ray Tracer *Spring 2018*

Physically-based Renderer

- Able to render images with full global illumination, using a probabilistic estimate of infinite light bounces.
- Improved the efficiency of ray-mesh collision using a bounding volume hierarchy acceleration structure.
- Created support for complex materials like glass and mirrors as well as BRDF's for microfacet materials.
- Added the option to support depth of field using a virtual thin-lens in front of the camera.

PintOS *Fall 2017*

Operating System

- Added efficient thread functionality such as non-busy waiting and priority scheduling utilizing synchronization variables like semaphores, locks, and condition variables.
- Implemented syscall functionality that maintained ACID standards to prevent against failure.
- Created a virtual cache using Clock Replacement Algorithm and write through to maintain RAM efficiency.

Organizations

PBL – Berkeley Phi Beta Lambda *Fall 2016 – Current*

Consulting and Internal Networking Committee Chair

- Planned 30+ member retreats, internal events, and large-scale activities for members to bond as a team.
- Preformed and taught case studies of companies and developed new marketing and branding strategies focused on increasing revenue and decreasing costs.

Tech Team

- Gathered schedule availabilities of members in csv and converted to JSON format for further processing.
- Worked with senior officers to develop an algorithm based on simulated annealing to generate tabling slots to maximize the exposure of each member to any other.
- Developed interactive front-end website to host the generated tabling schedules for club-wide use.
- Manage day to day workings of the portal (portal.berkeley-pbl.com, pbl.link/tabling).

Experiences

CS61A Course Staff *Spring 2016 – Spring 2017*

Lab Assistant and Tutor

- Tutored students one on one about topics such as object oriented programming, recursion, and run time.
- Paired up with one struggling student and assisted him in organization and studying over the semester.
- Guided students through pre-designed labs on topics that ranged from syntax to tree recursion.

Coding Languages: Python, Java, C, C++, HTML, CSS, JavaScript, JQuery, and SQL

Interests: Skiing, Longboarding, Hiking, Movies, Physics, and Pen Spinning