

Keyhan Vakil

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EDUCATION

UC BERKELEY
B.A. COMPUTER SCIENCE
Graduating May 2020
Cum. GPA: 4.0 / 4.0

LINKS

Github @ kvakil
Website @ kvakil.me

COURSEWORK

GRADUATE-LEVEL

Combinatorial Algorithms &
Data Structures
Beyond Worst-Case Analysis

UNDERGRADUATE

Data Structures & Algorithms
Computer Security
Operating Systems
Computer Architecture
Discrete Mathematics &
Probability Theory
Structure & Interpretation
of Computer Programs

SKILLS

PROGRAMMING

Fluent:

Java • Python • Javascript • Kotlin
Bash • C/C++ • Lua • CSS3 • \LaTeX

Familiar:

Haskell • Go • PHP • Typescript

FRAMEWORKS

Node.js • Bootstrap • Bulma • Vue.js

TECHNOLOGIES

Git • Grunt • TravisCI • Gradle

EXPERIENCE

Beginning Summer 2018 | New York, NY

JANE STREET | INTERN

January 2018 - Present | Berkeley, CA

UC BERKELEY | COMPUTER SECURITY HEAD TEACHING ASSISTANT

- Managed a team of fifteen teaching assistants to effectively produce course content.
- Developed technical projects and discussion section worksheets.

June 2017 - December 2017 | Berkeley, CA

UC BERKELEY | COMPUTER ARCHITECTURE TUTOR

- Taught small-group tutoring sessions of ten to twelve students.
- Worked alongside other tutors to develop exam review worksheets and presentations.

PROJECTS

VENUS | RISC-V ASSEMBLER, EDITOR AND SIMULATOR

- **Over 1,000 students** use Venus as part of courses at UC Berkeley and the Technical University of Denmark.
- Built an integrated development environment for programming **RISC-V assembly**, including a built-in emulator and debugger.
- **Designed** a modern and intuitive interface from scratch and realized it using the **Bulma CSS framework** and **HTML5**.
- Wrote extensive **unit tests** and implemented **continuous integration**.

P2P-PAILLIER | A DISTRIBUTED PEER-TO-PEER CALCULATOR

- Created a **peer-to-peer distributed** system which uses **homomorphic encryption** to add numbers using network consensus.
- **Integrated Firebase API** and other external libraries to provide backend support.
- Used **Bootstrap CSS** and **jQuery** to build an intuitive frontend.

MOONCHAIN | A SIMPLE BLOCKCHAIN IMPLEMENTATION

- Implemented key blockchain infrastructure, including **proof-of-work** and **Merkle chains**.
- Written in Moonscript, a dialect of **Lua**. Includes documentation and a command-line interface for experimentation.

MORE PROJECTS AVAILABLE ON GITHUB

AWARDS

2017	34 th /110	ACM International Collegiate World Finals
2017	top 1/3	Upsilon Pi Epsilon (CS Honor Society)
2016	2 nd	Pacific Northwest ICPC Programming Contest
2016	2 nd	Google Berkeley Programming Contest