JACOB KAUFMAN

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EDUCATION

University of California, Los Angeles
Bachelor of Science, Computer Engineering
Expected Graduation: June 2021
GPA: 3.76/4.00
Relevant Coursework: Data Structures, Algorithms, Digital Design, Signals and Systems, Graphics, Linux, Linear Algebra.

AWARDS AND HONORS

Upsilon Pi Epsilon, International Computing Honors Society. June 2019 - Present
Tau Beta Pi, National Engineering Honors Society. June 2019 - Present
Eta Kappa Nu, International Honors Society of the IEEE. June 2019 - Present
Dean's Honor List. Winter 2018, Spring 2019

COMPUTER SKILLS

Languages & Software:
Proficient: C++, Python, C. **Familiar:** Verilog, Adobe Creative Suite, LaTeX.
Operating Systems: Mac OS X, Windows, Linux.

PROJECTS

Tunnelman (C++)

- Created a 2-D video game on Mac where player digs through earth to find gold.
- Used inheritance and polymorphism to organize class hierarchy for characters, enemies, items, actions, and sounds. Utilized various data structures to organize game items and states.
- Implemented search algorithms for enemies to find player in a maze-like map.

Malloc (C)

- Implemented *malloc*, *realloc*, and *free* functions in C from scratch.
- Optimized and balanced space usage with speed. Organized virtual memory at the byte-level, using headers and footers, to efficiently allocate memory.

Stacker (Verilog)

- Programmed the popular arcade game, *Stacker*, for Xilinx FPGA board. Wrote Verilog modules for game mechanics, music, score, display, etc. Configured auxiliary devices such as VGA for display and piezoelectric buzzer for music.
- Project chosen by professor for use as a model project for future classes.

WORK EXPERIENCE

Instructor June 2019 - August 2019
Internal Drive, Inc.

- Taught intensive programming classes at UC Irvine to middle and high school students.
- Classes include Python coding, encryption, robot programming, Raspberry Pi.

Learning Assistant January 2019 - Present
Math and Physics Departments, University of California, Los Angeles

- Teach multivariable calculus and physics to students in college-level classrooms.
- Conduct various exam review sessions with over 100 attendees each.

LEADERSHIP

Director of Internal Affairs May 2018 - May 2019
UCLA Club Sport - Dragon Boat

- Designed various apparel items for teammates, including shirts and jackets, using Adobe CS. Designed yearbook and quarterly newsletter.
- Raised over $2000 for the team by designing and selling fundraising t-shirts.
- Organized and directed annual Alumni Day.