WILLIAM WALKER

Bachelor's, UC Berkeley Computer Science

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EXPERIENCE

Academic Tutor K-12
Academy of 21st Century Learning

📅 January 2023 – Present

- One-on-one mathematics tutoring for students K-12, from simple arithmetic to calculus.
- Developed personalized, adaptive approaches to meet each student's learning needs.
- Collaborated with team members to support students' overall academic success.

Teaching Assistant - Operating Systems (CS162)
UC Berkeley

📅 June 2019 – December 2019

- For Summer and Fall semesters, led weekly discussion sections and successfully taught students challenging topics such as distributed systems theory and file system implementations
- Mentored groups of students to enhance their teamwork and efficiency in developing a basic OS (pintOS)
- Oversaw a drastic overhaul of course material as part of a small team, and supported students through the transition
- Developed new exams, homework, and discussion worksheets
- Proctored and graded student exams and homework
- Created and led comprehensive pre-exam review sessions on course material (synchronization, distributed systems, etc)

PERSONAL PROJECTS

VFlip
github.com/Solasel/vflip

AI designed to play Voltorb Flip optimally.

- Models the game as an expectimax game tree with the player and randomizer as agents
- Caches results of analysis to prune duplicate branches
- Starts by enforcing arc-consistency for guaranteed points, and then uses a probabalistic approach to maximize score.

WIOM
github.com/Solasel/WIOM

Computer processor designed from digital logic components.

- RISC-V instruction set architecture
- Branch Prediction
- 5-stage pipeline
- Fully optimized hazard avoidance
- Features a microcode generator, which translates opcodes and control information into Logisim-readable memory data

EDUCATION

BA in Computer Science
University of California, Berkeley

📅 Class of 2019

CompSci GPA: 3.82
Overall GPA: 3.63

PERSONAL INFO

I am extremely passionate about computer science. I especially enjoy the process of finding elegant solutions to difficult problems. While I'm most excited about lower-level programming (OS, machine architectures), I am also intrigued by higher-level applications (databases, AI). I am meticulous about code style; I pay particular attention to cleaning up, organizing, and commenting my code.

CODING LANGUAGES

C   ●●●●●
Java   ●●●●●
Python   ●●●●○
Go   ●●●●○
Javascript   ●●●●○
... And many more!

LANGUAGES

English   ●●●●●

Japanese   ●●●●○

French   ●●○○○

REFERENCES

Jack Kolb
@ University of California, Berkeley
✉ jkolb@berkeley.edu
Professor for CS162, Summer 2019.

Jennifer Rafael
@ Academy of 21st Century Learning
✉ jenrafael@academy21learning.com
Supervisor for tutoring job at the Academy of 21st Century Learning