Morgan Reschenberg

I'm currently a junior studying Computer Science and STEM Education at UC Berkeley as a Regents' and Chancellor's scholar. I am passionate about CS Education outreach and making the CS community more inclusive and accessible to all.

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EXPERIENCE

UC Berkeley, Computer Architecture and Machine Structures — *Course Tutor (Prev. Lab Assistant)*

JUNE 2017 - PRESENT

Provided guidance to over 80 students on labs and homework covering C, MIPS, RISC-V, caches, virtual memory, CPU design, and more. Weekly, created content for and taught reviews of course content. Staffed exam review sessions and project office hours (Projects: CPU construction, MOESI cache coherence, MIPS and RISC-V assembler/linker/loader/simulator, etc.)

UC Berkeley, Regents' and Chancellor's Scholars Association — *Web Development Committee Coordinator (Prev. Member)*

AUGUST 2015 - PRESENT

Instructed a team of 13 undergraduate students on the development and maintenance of RCSA.berkeley.edu. Managed student data through SQLite, Django, and Haystack, guided front-end development through HTML, CSS, JavaScript, and Bootstrap. Rewrote ScholarConnect: an interactive database to help prospective scholars contact current Cal students.

UC Berkeley, Berkeley ANova — *Curriculum Director, Instructor*

AUGUST 2015 - DECEMBER 2016

Led UC Berkeley students in teaching 10-week courses in HTML/CSS, Python, Java, or Scratch to underserved Bay Area high school and middle school students. Ran a committee of 15 instructors devoted to developing curriculum for these subjects using the 5E lesson plan format and Common Core Standards. Instructed at DCA in Oakland and De Anza High in El Sobrante.

EDUCATION

UC Berkeley, Berkeley CA — *Computer Science, STEM Education*

August 2015 - May 2019

PROJECTS

Gitlet — *Mini git-like version control system*

Constructed in Java from scratch importing only Java's Collections objects. Has local add, commit, remove, reset functionality and includes branching, merging, and merge-conflict detection.

CPU — *Two stage pipelined MIPS 32-bit CPU*

Constructed schematically in Logisim. Has core instruction set functionality including branching, jumping, and arithmetic/logical operations.. Modularised into Instruction Fetch, Decode, RegFile, ALU, Read Mem, and Write Mem stages. Pipelined between fetch and decode.

PROGRAMMING LANGUAGES AND COMPETENCIES

Python, Java, C++, C, MIPS, RISC-V, x86, Go, Django, HTML, CSS, Bootstrap, Logisim, MultiSim, Unix, Git, IntelliJ, VirtualEnvs

AWARDS

Regents' and Chancellor's Scholar Awarded 2015 to the top 0.2% of freshman applicants to UC Berkeley

Dean's List Honors Awarded 2016, 2017 to students with a GPA in the top 4% of L&S Undergraduates

NOTABLE COURSES

Computer Security

Efficient Algorithms and Intractable Problems

Computer Architecture and Machine Structures

Data Structures and Programming Methodology

Designing Information Devices and Systems

Discrete Mathematics and Probability Theory

Knowing and Learning in Mathematics and Science