Mariah Rogers

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EDUCATION

UC BERKELEY

B.A. in Computer Science
Expected May 2017 | Berkeley, CA
College of Letters & Science
GPA: 3.37 / 4.0

COURSEWORK

COMPUTER SCIENCE

Structure & Interpretation of Computer Programs
Data Structures
Introduction to Computer Architecture
Discrete Mathematics & Probability
Efficient Algorithms & Intractable Problems
Introduction to Database Systems (current)
Engineering Parallel Software (current)

MATHEMATICS

Linear Algebra and Differential Equations
Calculus (I & II)

SKILLS

PROGRAMMING LANGUAGES

Python • Java • C • Scheme • C++ • Lua

LANGUAGES

Portuguese

TOOLS

Emacs • Git/source control • GDB Debugger • LaTeX• Microsoft Office • Eclipse • Valgrind

SPECIAL

Intel SSE Intrinsics • Hadoop MapReduce • OpenMP • OpenCL

PROJECTS

- Wrote a compiler (in C) from LISP-like simplified language into MIPS assembly.
- Wrote an artificial intelligence player for strategy board game.
- Designed pipelined RISC CPU using Logisim (logic circuit simulator).
- Implemented algorithmic optimization for matrix multiplication using parallelization, SSE intrinsics and cache blocking.
- Implemented image compression, run length encoding and image filtering (blur and sobel).
- Wrote a command-line math proficiency game for elementary school students.

WORK EXPERIENCE

NATIONAL SECURITY AGENCY | Computer Science Intern

Summer 2015 | Washington, DC

- 12 out of 900 applicants selected to be Computer Science Interns.
- Created dropped-pronoun identification and tagging program for informal Portuguese text.
  - Now used by other NLP downstream analytics.
    - Wrote rule-driven algorithm to identify locations of dropped pronouns and insert the appropriate missing pronoun based on grammatical structure and conjugation rules.
    - Developed statistical machine learning model around output from the rule-based program.
    - Implemented naive algorithm for disambiguation and coreference resolution of entities in the documents.

NEUROBEHAVIORAL SYSTEMS, INC.

Student Software Engineer
September 2014 – June 2015 | Berkeley, CA

- Implemented a server and client using Python's Socket module (TCP/IP protocol) for remotely running experiments using employer's product, Presentation®.
- Received weekly mentoring sessions with CEO on good programming practices.

EECS DEPARTMENT, CS 61B | Lab Assistant

Summer 2014, January 2015 - May 2015 | Berkeley, CA

- Assisted an Undergraduate Student Instructor in lab sections during two semesters for the data structures course at UC Berkeley.
- Answered students questions and clarified key concepts in the context of their lab assignments and course projects.
- Assisted debugging projects and assignments while teaching efficient debugging practices.

COMPUTER SCIENCE MENTORS, UC BERKELEY

Mentor
January 2015 - May 2015 | Berkeley, CA

- Led small weekly sections (3-5 students), teaching material supplementary to parent course, Data Structures (61B).
- Clarified and reiterated core concepts, answered students' questions and provided personal student-to-mentor interaction.

COLLEGE OF ENVIRONMENTAL DESIGN, UC BERKELEY

Computer Resource Assistant
May 2014 - September 2014 | Berkeley, CA

- Wrote Excel scripts to improve management of student databases and their use for daily transactions.
- Performed regular maintenance on large format printers, plotters, professional-grade inkjet printers, and large-scale document scanner.
- Assisted with assembly of 10+ new desktop computers and with the re-imaging of 50+ Windows computers.