

Radhika Marvin

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EDUCATION

UC BERKELEY

COLLEGE OF LETTERS AND SCIENCE

Majoring in:

- Computer Science
- Integrative Biology
- English

Expected May 2015

Cum. GPA: 3.60 / 4.0

LINKS

github.com/radahika

COURSEWORK

UPPER DIVISION

- Operating Systems
- Advanced Algorithms
- Artificial Intelligence
- Population Genetics
- Computer Networking
- Compilers + Practicum

LOWER DIVISION

- Data Structures
- Computer Architecture
- Discrete Mathematics
- Probability Theory
- Linear Algebra & Differential Equations

SKILLS

PROGRAMMING

Python • Javascript • Java • C
Scheme • \LaTeX

Familiar:

Vim • CSS • TCP

Flask Web framework • D3

INTERESTS

VOLUNTEER WORK

- Surgery Assistant at Fix Our Ferals
- Clinical Volunteer at Paw Fund

HOBBIES

Hackathons • Swing Dancing
Sewing • Creative Writing
Board Games

PROJECTS

HOUSEMATES | HOUSE CHORE MANAGER

pear-soap.herokuapp.com

- Designed and built a web application for distributing chores and managing finances with your housemates.
- Written in Python using the Flask web framework.
- Backed by a SQL database using Flask-SQLAlchemy.

PATTERN MATCHER | SET OPERATIONS ON REGULAR EXPRESSIONS

- Wrote a domain-specific language to pattern match strings.
- Creates new regular expressions by applying set operations on user-inputted regular expressions.
- Used automata (NFAs and DFAs) to perform the set operations on input regular expressions and return new pattern matchers.

FIREWALL | STATEFUL ACTIVE APPLICATION-LAYER FIREWALL

- Implemented a firewall in Python that sniffs incoming and outgoing IPv4 packets and applies a dynamic set of rules to determine whether to drop, pass, or log a packet.
- Terminates connection in the event of denied hosts.
- Tracks TCP connections and logs HTTP transactions.

FILE COMPRESSOR | HUFFMAN ENCODING

- Wrote an engine in Java that compresses any type of file or directory.
- Compressor scans files byte-by-byte, uses Huffman Encoding to determine the best encoding map, and then streams files in to encode them.

EXPERIENCE

INVERTEBRATE RESEARCHER | CALDWELL LAB, UC BERKELEY

June 2014 – Present | Berkeley, CA

Analyzed and created data sets for the isotopic similarities between octopuses and their possible prey to create a graph of consumption. Researched with Professor Roy Caldwell and Jennifer Hofmeister.

INSTRUCTOR | SCIENCE FICTION & FANTASY CREATIVE WRITING DECAL, UC BERKELEY

Jan 2013 – May 2013 | Berkeley, CA

Instructed around twenty-five students in a creative writing course focused on analyzing the history and evolution of science fiction and fantasy genres. Facilitated open and interactive discussions and held one-on-one office hours to provide feedback on students' creative writing assignments.