Radhika Marvin

radahika.github.io
marvin.radhika@gmail.com | 760.821.3933

EDUCATION

UC BERKELEY
College of Letters and Science
Majoring in:
- Computer Science
- Integrative Biology
- English

Expected May 2015
Cum. GPA: 3.6 / 4.0

LINKS

github.com/radahika
pear-soap.herokuapp.com
Transcript

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 • D3
Flask Web framework

INTERESTS

VOLUNTEER WORK
Surgery Assistant at Fix Our Ferals
Clinical Volunteer at Paw Fund

HOBBIES
Hackathons • Swing Dancing
Sewing • Creative Writing
Board Games

PROJECTS

PERSIMMON | Sentiment Analysis of Facebook feed
- Categorizes Facebook statuses as positive or negative using sentiment analysis.
- Implemented using a Naive Bayes classifier and the NLTK platform.

HOUSEMATES | House Chore Manager
pear-soap.herokuapp.com
- Designed and built a web application using the Flask web framework for distributing chores and managing finances with your housemates.
- Database implemented using the flask-SQLAlchemy extension to store user and house data.
- Text message reminders sent using Twilio REST API.

PATTERN MATCHER | Set Operations on Regular Expressions
- Wrote a domain-specific language in Javascript to pattern match strings.
- Creates new regular expressions by applying set-operations on user-inputted regular expressions.
- Back-end uses 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 even directories.
- 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 to 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 to 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.