Dickson Tsai

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Education

University of California, Berkeley | B.A. Computer Science and Linguistics
Expected graduation: Spring 2016, GPA: 3.88

Work Experience

Undergraduate Student Instructor for CS61A | Summer 2014, Fall 2014, Spring 2015 (Present)

- Leading 20-student discussion sections; enhancing disc/lab material with more practice
- Contributing to real-time web app to handle office hour crowding near project deadlines
    - Github: https://github.com/kvchen/officehour-queue

Linguistics Undergraduate Research Apprentice | Spring 2014, Winter 2014

- Built a searchable MySQL database of Scottish Gaelic sentences/morphemes using Angular.js frontend, REST backend in PHP Slim
- Designed authentication system for registered users to edit sentences/chapter metadata, to create personal collections of sentences for more efficient research
- Link: linguistics.berkeley.edu/~csheil/gaelic

Reader for UC Berkeley Courses | CS61A: Summer 2013, Fall 2013; CS70: Spring 2014

- CS70: Produced homework video solutions (Camtasia/Wacom), graded student homework, wrote Python/BASH scripts to help with grading

Personal Projects

WikiGuesser | wikiguesser.herokuapp.com | April 2014

- Wikipedia title-guessing game: built in Big Hack (Cal vs. Stanford hackathon)
- Built Python scraper, Node.js/MongoDB game server

Morphosyntax JSON GUI | March 2014

- Python Tkinter GUI for entering morphosyntactic data conveniently to JSON format and for organizing JSON files in a local directory
- Supports Dropbox integration for group collaboration/data sharing. Github.

Cache Text | bit.ly/cache_text | August 2013

- Chrome extension for navigating webpages with saved snippets of URLs/search text

Data Structures in 5 Minutes | bit.ly/datastrucin5 | May 2013

- 14-video series based on UC Berkeley's Data Structures course CS61B for final exam review
- Results: 74,000 views, 524 subscribers

Coursework and Most Recent Course Project

Distributed Key-Value Store | Operating Systems | December 2014

- Collaborated with 3 to build a system supporting replicated data storage, concurrent GETs
- Reliability ensured by Two-Phase Commit protocol, recovery from failure implemented

Other Relevant Coursework:

- Algorithms, Probability in EECS, Artificial Intelligence, Computer Security, Computer Architecture, Data Structures, SICP

Activities

Web Development Committee Co-Chair, Upsilon Pi Epsilon (UPE) | Present

- Creating interview bank on Django/PostgreSQL website, maintaining Postfix mailing server

Skills

Proficient: Python, Java, JavaScript, Angular.js, HTML, Git, MySQL
Working knowledge of: C, R, Excel, LaTeX, Node.js, PHP (Slim), jQuery, CSS, Django, Flask
External Courses: Machine Learning (Coursera), Computing for Data Analysis (Coursera), Sabermetrics 101 (EdX)