

WENSON HSIEH

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EDUCATION

University of California, Berkeley

exp. May 2015

B.S. in Electrical Engineering & Computer Science
Regents and Chancellors Scholar
Member of Eta Kappa Nu, EECS honors society
Overall GPA: 3.792 (Major: 3.755)

EXPERIENCE

International Computer Science Institute

June 2013 - Present

Research Intern

Berkeley, CA

- Analyzed large brain network data (over 10^5 vertices and 10^8 edges) using path length and clustering.
- Demonstrated that existing random network models fail to capture hi-res brain network behavior.
- Developed sparse graph framework in Python, using Scipy, Numpy, Matplotlib and inline C.
- Sped core algorithms by more than 100x over pure Python code by writing C extensions.
- Developed novel algorithm for determining similarity between adjacent vertices in brain networks.

Sandia National Laboratories

May 2012 - August 2012

Software Developer

Livermore, CA

- Developed Eclipse rich client-based editor for physics simulation scripts and 3D mesh visualization.
- Added features such as algebraic expression parser and plotter, automatic formatting, syntax coloring.
- Used SVN, scrum development framework and JIRA issue tracking.

PERSONAL PROJECTS

Couplr

Summer 2013

node.js - Express - jQuery - MongoDB

www.couplr.co

- Facebook app that lets users upvote or downvote potential matches between friends.
- Developed accurate match suggestion algorithm based on Facebook activity in user's social network.
- Built back end using MongoDB, node.js. Cached user data to ensure fast retrieval of social graphs.

Q(WOP)

Summer 2013

HTML5 - Box2D.js

- Alternate version of flash game QWOP in Javascript and HTML canvas. Used Box2D.js for physics.
- Developed AI to learn QWOP using of feature-based Q-learning and feed-forward neural networks.

Dygraph

Summer 2012

Java2D - Swing - JApplet

- Facebook app to represent friends' wall activity as a graph.
- Implemented force-directed layout algorithm to visualize communities within friend graph.
- Implemented eigenvector-based community detection algorithm to find groups of friends.

More projects available at <http://github.com/whsieh>