HARRISON WRAY

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EDUCATION

Stanford University *2010 – present*

M.S. Computer Science. 3.94 CS GPA. *Degree exp. June 2016*

B.A. Psychology, Neuroscience track. 3.82 total GPA. *June 2014*

PROFESSIONAL EXPERIENCE

Microsoft, Software Development Engineer Intern *June – September 2014*

Designed and implemented a new photo-analysis feature and storage schema for OneDrive cloud platform. Collaborated with an international research team to leverage their SDK. Optimized clustering algorithms for use on billions of photos. Built prototype UIs and performed A/B user tests. Monitored feature QoS, usage analytics (DAU), and telemetry data from internal users.

Breeze/Zephyr, Temporary Start-Up Intern *January – March 2014*

Automated weekly status emails and a monthly payment system in a Ruby on Rails environment.

Stanford HCI Group, Research Intern *June 2013 – April 2014*

Built prototype interface concepts for a tablet-based textbook. Created GestureMath, a Node.js app for intuitive manipulation of math expressions and graphs. Designed TeX-based UI and touch language for mathematical operations. Wrote backend architecture: expression parser, symbol tree builder, and tree-matching algorithms. Performed user tests and developed iteratively.

Stanford Memory Lab, Research Assistant *June 2012 – May 2013*

Designed UIs and Mechanical Turk tasks for studies of learning, attention, memory storage, and recall. Assisted in the use of EEG and fMRI measures, and analyzed data to outline regions and periods of interest. Identified correlations and fitted data to theoretical models using MatLab.

SELECTED COURSEWORK

CS 142 (Web Applications): Built a social photo-sharing website using Ruby on Rails, JavaScript, AJAX, and SQL; including security measures against SQL injection, DDOS, session attacks, etc.

CS 147 (HCI Design): Methods and principles of UI/UX development: need-based design, rapid prototyping, iterative development, heuristic and user evaluations.

CS 110 (Systems Principles): Implemented and optimized a functional shell, an HTTP proxy (with cache), RSS aggregator, UNIX filesystem layers, thread pools, and a MapReduce framework. (C/C++)

CS 124 (NLP): Spelling auto-correction, document search algorithms, ranked retrieval, sentiment analysis, machine translation, and Jeopardy! question answering, using probabilistic methods.

HONORS AND ACTIVITIES

Course Assistant and Website Dev, CS 147 (Intro to HCI Design). *Fall 2014*

Best Interaction Design and Best Poster Design, CS 147 (Discoveroute project). *Spring 2014*

Stanford Resident Computer Consultant for Theta Delta Chi house. *2013-2014*

Stanford Prize for research at the Stanford Undergrad Psych Conference. *2012*

PROJECTS

github.com/hwray

Tutti: Android app combines music libraries from devices on the same network to allow for shared, synchronized playlists. Developed in conjunction with engineers from Audi/VW. Get it on Google Play.

Dais: Google Glass app that provides analytics and live feedback cues for your presentations: "speak up," "talk slower," "look at the left half of the audience more often," etc. *github.com/hwray/Dais*

Discoveroute: Node.js + MongoDB web app. Time- and route-constrained business search: "Find me a coffeeshop close enough to my route to work to still get in by 9." *github.com/hwray/Discoveroute*

Narrative: Node.js app for sharing news and personal stories in a multi-modal format. Built using Backbone.js, Underscore.js, and Google Maps API. *github.com/StanfordHCI/SpatioTemporalNarrative*

Phonemone: HTML5 game that uses principles from educational psychology to teach players to distinguish similar word sounds in Mandarin Chinese. *scirra.com/arcade/puzzle/3885/Phonemone*

INTERESTS

DJing, classical and jazz piano, hiking, cooking, gaming, education, Seattle, and driving stick.