Dawn Chen

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Highlights

- Solid knowledge of statistics and machine learning; familiarity with deep learning
- Many years of programming experience; ability to quickly learn new languages and technologies
- Extensive experience in designing and conducting behavioral experiments and analyzing the resulting datasets

Education

PhD in Psychology (Major: Computational Cognition), 2014 ◆ University of California, Los Angeles
BAs in Computer Science and Cognitive Science (double major), 2008 ◆ University of California, Berkeley

Employment History

Postdoctoral Researcher, 2015-2017 ◆ Institute of Cognitive and Brain Sciences, UC Berkeley ◆ Advisor: Tom Griffiths

Postdoctoral Researcher, 2014-2015 ◆ Department of Psychology, UCLA ◆ Advisors: Keith Holyoak and Hongjing Lu

Teaching Assistant, 2009-2013 ◆ Department of Psychology, UCLA ◆ Courses taught: Graduate Psychological Statistics, Cognitive Science Laboratory: Neural Networks, Research Methods in Psychology, Cognitive Psychology

Selected Projects

Examining how machine learning models of analogy capture and deviate from human cognition, 2015-2017

- Designed and implemented web experiments to collect human responses on analogy tasks and evaluated machine learning methods (word2vec and GloVe) on the resulting datasets
- Technical highlights: Achieved a 10x reduction in running time of Theano code for transforming word vectors, ensured crowdsourcing data quality, worked with large vocabularies (3 million words)
- Tools: Python (numpy, scikit-learn, pandas, etc.), JavaScript, HTML, CSS, Amazon Mechanical Turk, psiTurk, SQL
- Publication: Chen, D., et al. (to appear). Evaluating vector-space models of analogy.

Developing a computational model of relation learning (BART) and various extensions, 2008-2015

- Created a model of how humans learn relations, which are necessary for analogical reasoning, and evaluated the model on existing and new behavioral data
- Technical highlight: Became an expert in code vectorization (which reduces running time by large factors)
- Tools: MATLAB, Python, Java, Amazon Mechanical Turk, Qualtrics
- Selected publications: Lu, H., Chen, D., et al. (2012). Bayesian analogy with relational transformations. *Psych Review*, *119*, 617-648. ◆ Chen, D., et al. (2014). The discovery and comparison of symbolic magnitudes. *Cog Psych*, *71*, 27-54. ◆ Chen, D., et al. (2017). Generative inferences based on learned relations. *Cog Sci*, *41*, 1062-1092.

Investigating how to help people develop intuition for solving problems in a given domain, 2008-2009

- Designed and implemented desktop experiments for examining whether practice on certain alternative versions of a problem helps people to develop intuition for the original problem, and analyzed the results
- Technical highlight: Quickly resolved UI issues during data collection, maximizing limited participant resources
- Tools: Java, Swing, SPSS
- Publication: Chen, D., & Holyoak, K. J. (2010). Enhancing acquisition of intuition versus planning in problem solving. In *Proceedings of the 32nd Annual Meeting of the Cognitive Science Society* (pp. 1875-1880).

Awards and Honors

UCLA Dissertation Year Fellowship ($20,000), 2013-2014 ◆ UCLA University Fellowship ($6,000), 2013 ◆ UCLA Graduate Summer Research Mentorship Program ($4,700), 2010 and 2011 ◆ NSF Graduate Research Fellowship Program Honorable Mention, 2010 ◆ UCLA University Fellowship and Chancellor's Prize ($30,000), 2008-2009 ◆ Committee on the Status of Women in Computing Research (CRA-W) Distributed Mentor Project ($6,000), 2007

Languages and Software

Python (expert), MATLAB (expert), Java (proficient), JavaScript/HTML/CSS (prior experience), SQL (prior experience), numpy, scikit-learn, pandas, SPSS, Amazon Mechanical Turk, psiTurk, Qualtrics, Linux, Mandarin (native), English (native)