

## EDUCATION

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- 2012 - 2017 **Ph.D. (expected) Cognitive and Information Sciences** University of California Merced, CA USA  
2010 - 2012 **M.S. Cognitive and Behavioral Sciences** Illinois State University, IL USA  
2006 - 2010 **B.S. Psychology/Philosophy (*cum laude*)** Illinois State University, IL USA

## FELLOWSHIPS AND AWARDS

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- 2017 **Dean's Dissertation Year Fellowship** \$18,576.68  
2015-16 **IBM PhD Fellowship** \$30,000  
2014 **Yelp Inc. Academic Dataset Challenge, grand prize** \$6,500
  - Information-theoretic analysis over 200k reviews in **Python** and **R** show quadric relationship with star ratings

2014 **Koostama Data science Fellow** \$2,500
  - Developed information-theoretic and semantic features for machine learning models using Natural Language Processing tools in **R** and **Python**

## PERSONAL SKILLS

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**Languages:** Python (SciPy, NumPy, NLTK, pandas,...), R (tm, igraph, network, ggplot2, plyr,...), Action Script (AS3)

**Statistics/Tools:** Linear models (GLM, OLS, L1, L2 & Elastic Net), Information theory, Graph theory, Machine Learning, Nonlinear methods, Latex, iWork, Microsoft Office, Jupyter, RStudio

## EXPERIENCE

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- 2010-2012 **Experimental Psychology (graduate research)** Illinois State University, IL
  - Human Subjects Experimental Design and Analysis.** Designed, ran and analyzed fractional factorial experiments to efficiently test theories in cognitive psychology \*

2012-present **Data Science (graduate research)** University of California, Merced, CA
  - Translational Science.** Used theories from Cognitive and Social sciences to uncover biases in large natural behavior datasets, such as >2.2million **Yelp, Inc.** and >4million **Amazon** reviews (and the *Corpus of Contemporary American English (COCA)* >2billion words)
    - Used **R (tm, RWeka, Igraph and Network)** to manipulate and model large social network and text data \*
    - Used **Python (NLTK and NumPy)** to create information-theoretic language models \*
    - Used *Linguistic Inquiry and Word Count (LIWC)*- To analyze semantic review content \*
    - Used **R (plyr)** to show online review ratings are biased away from previous review ratings \*
  - Technical packages.** Co-developed the **R** package - [cm SCU](#) - an efficient probabilistic hash table replacement to the standard *document term matrix* function in the R package **tm**. Used this to implement state of the art information-theoretic smoothing algorithms including **Modified Kneser-Ney** on >2.2million online reviews \*
  - Interdisciplinary collaborations.** Established and maintained a collaboration with 18 researchers across 13 universities and 3 countries using an online blog to more efficiently communicate ideas \*
  - Experimental work.** Collected **real-time user data** in multiple studies using **Flash (AS3)**, deployed on *Amazon's Mechanical Turk*
    - Tracked cursor movements to show how language influences memory recall in real time ([Experiment](#)) \*
    - Tracked keyboard latencies in spontaneous typing on over 600+ participants and show word probabilities influence realtime typing dynamics ([Experiment](#)) \*
  - Recruited, managed and trained** >10 undergraduates in experimental methods, data collection and data analysis

2010-2016 **Teaching Assistant**
  - Assisted in teaching 9 different classes across 2 different universities and 3 departments. Taught labs/seminars to groups of 30+, Evaluated writing, projects and examinations for up to 180 students at a time. Topics: Philosophy Cognitive Science, Psychology, Statistics, Research methods, Logic

\* Associated publications can be found on my [website](#)

## SERVICE

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**Editor:** Behavior Research Methods - *Springer*

**Reviewer:** PLoS ONE, Journal of Theoretical and Artificial Intelligence, Annual Meeting of the Cognitive Science Society, various edited volumes in Cognitive Science

**Qualitative Measures Advisor** ([NAPDA](#)): Designed, analyzed and managed graduate students in survey and NLP analyses

**Graduate Mentor/Founder** - Cognitive Science Student Society (CSSA, UC Merced)