Eric Bigelow

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INTERESTS Machine learning, computational linguistics, computer vision.

SKILLS

- Strong oral & written communication skills
- Working knowledge of variety of NLP, machine learning, data analysis, & data visualization techniques
- Adept Python coder, able to efficiently write clean, well-documented code; familiarity with a variety of data science tools such as: numpy, scipy, matplotlib, Jupyter Notebook, scikit-learn, nltk, opencv

PROGRAMMING LANGUAGES

Strong: Python
Competent: LaTeX, R, JavaScript
Passable: MATLAB, Java, Lisp, Haskell, Bash

EDUCATION

University of Rochester, Rochester, NY, USA

M.S. in Computer Science — Sep 2015 – Present

- Current GPA: 4.0 / 4.0
- Completed Coursework: Statistical NLP, Data Mining, Computational Semantics
- Coursework in Spring 2016: Machine Learning, Computer Vision, Computational Neuroscience

B.A. in Computer Science — Sep 2010 – May 2014

B.S. in Brain & Cognitive Sciences

- GPA: 3.6 / 4.0
- CS Coursework includes: Logical Foundations of A.I., Human-Computer Interaction, Dialog Systems, Theory of Computation, Data Structures & Algorithm Analysis
- BCS Coursework includes: Natural Language Processing, Language & the Brain, Semantic Analysis, Psycholinguistics, Cognition

RESEARCH EXPERIENCE

University of Rochester, Brain & Cognitive Sciences Department

Lab Manager, Computation & Language Lab — Aug 2014 – Aug 2015

- Led project implementing vectorized data analysis to infer posterior distributions over hyper-parameters in a Bayesian model of concept learning
- Contributed to open-source Python library for statistical modeling
- Designed 600+ participant numerical cognition study, distributed over Amazon Mechanical Turk

Research Assistant, Tanenhaus Lab — May 2012 – Nov 2012

- Worked with experimental paradigm studying grounding and miscommunication in dialogue during collaborative problem solving task

University of Rochester, Computer Science Department

Research Assistant, Rochester Human-Computer Interaction Lab — Jun 2014 – Aug 2014

- Applied supervised and unsupervised algorithms to a large multimodal dataset (the MIT Interview Dataset, pending public release)
- Wrote Matlab code to perform time-series analysis, audio & video manipulation, data visualization, and for saving & loading data across functions in a common structured format

Research Assistant, Len Schubert's Lab — Jan 2013 – May 2014

- Leading role in novel project to implement a specialist system for reasoning with spatial language as part of a larger natural language understanding framework; designed primary components of architecture
- Worked with two other undergraduates in an independently organized group to develop specialist architecture and model database using Python

PUBLICATIONS

CONFERENCES

E. Bigelow and S. Piantadosi, "Inferring priors in compositional cognitive models," *(to be submitted)*.

E .Bigelow, D. Scarafoni, L. Schubert, and A. Wilson, "On the need for imagistic modeling in story understanding," in *Biologically Inspired Cognitive Architectures 2014* (oral presentation), Cambridge, Mass., USA, Nov 2014.

JOURNALS

T. Hu,E. Bigelow, J. Luo, and H. Kautz, “Tales of Two Cities: Using Social Media to Understand Idiosyncratic Lifestyles in Distinctive Metropolitan Areas,” *IEEE Transactions, (under review)*.

E. Bigelow and S. Piantadosi, “A Large Dataset of Generalization Patterns in the Number Game,” *Journal of Open Psychology Data, (under final review)*.

[*Last updated on 2015-12-23*]