Chris Fox

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Education

2014 (expected) **PhD Computer Science**, *North Carolina State University*, Raleigh, NC.

2012 **MS Computer Science**, *North Carolina State University*, Raleigh, NC.
Master's thesis: "Following Topics over Time using Epoch Latent Dirichlet Allocation."

2009 **BS Mathematics, BS Economics**, *University of Washington*, Seattle, WA.

Graduate Computer Science Courses.

- Automated Learning and Data Analysis
- Artificial Intelligence
- Graph Theory
- Reasoning Under Uncertainty (probabilistic graphical models)
- Natural Language Dialogue Systems

Experience

Jan. 2012 – present **Research Assistant**, *North Carolina State University*, Raleigh, NC.

- Developed an extension of Latent Dirichlet Allocation in order to model the generation of text documents from topics that change over time.
- Implemented an algorithm for approximate Bayesian inference in Python.
- Collected a corpus of online news using Twitter's API.
- Prepared a text corpus for statistical analysis using standard techniques.
- Mentored an undergraduate on a project to use the Python library BeautifulSoup to extract the main text from web pages.

Sept. 2009 – June 2010 **Research Assistant**, *University of Washington*, Seattle, WA.

- Built an HTML Canvas-based player to display dynamically generated animations of flow cytometry data using HTML, CSS, and Javascript.
- Contributed to a Django application to enable a user to select a subset of flow cytometry data to visualize (`http://armbrustlab.ocean.washington.edu/resources/seaflow/interface`).
- Wrote a Python script to produce KML from flow cytometry data in order to visualize the data in Google Earth.

Projects

SouffleTutor.

- Designed and built a voice-controlled iPhone application for a class on dialogue systems.
- Used the OpenEars Objective C framework, which wraps CMU Sphinx, for speech recognition.
- Gathered a corpus of user interactions using an app mock-up.
- Applied a naive Bayes classifier incorporating a unigram language model to discern the dialogue act associated with a user utterance.

Research Experience for Undergraduates.

- Implemented random sampling for branched polymers.
- Formulated conjectures regarding properties of random branched polymers (e.g., degree distribution, degree sequence, radius) based on sample properties.