Christopher Fox

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Experience

May 2015 – Aug 2015
Software Engineering Intern, *Google*, New York, NY.
- Natural language understanding for Google Now, Google's virtual assistant.
- Used Python and C++ to prototype and evaluate an improvement to the system.

Aug 2014 – May 2015
Research Assistant, *North Carolina State University*, Raleigh, NC.
- Built Wizard-of-Oz data collection interface for spoken dialogue system development using the Unity platform and C#.

May 2014 – Aug 2014
Software Engineering Intern, *Google*, New York, NY.
- Prototyped an improvement to a tool for Adwords customers using a distributed computing framework in C++.
- Built a web-based demo with Python, Javascript, HTML, CSS.

Aug 2013 – May 2014
Teaching Assistant, *North Carolina State University*, Raleigh, NC.
- Graded/wrote tests, homework, projects for two courses: Spoken Dialogue Systems and Graph Theory.

May 2013 – Aug 2013
Software Engineering Intern, *Apple*, Cupertino, CA.
- Researched, implemented, and tested a load balancing algorithm for the Game Center backend in Java.
- Built a web-based visualization to show estimated improvement under the new system.

Jan 2012 – May 2013
Research Assistant, *North Carolina State University*, Raleigh, NC.
- Modified Latent Dirichlet Allocation, a probabilistic model of latent thematic structure in a text corpus, to learn topics with both static and time-varying aspects.
- Used Gibbs sampling to fit a model to the corpus of 32K tech news articles gathered using the Twitter API.
- Documented the model and the results in my master's thesis (figure showing time-specific words for a "legal" topic).

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.
- Used Python to produce a KML visualization in Goolge Earth from flow cytometry data.

Education

2012 **MS Computer Science**, *North Carolina State University*, Raleigh, NC.

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

Projects

- **Route Teaching Game** Led the development of a web-based game (screenshot) where one user teaches another to draw a route, using Firebase and Google Maps API.
- **Walk Your City iOS App** Built a Google App Engine backend supporting geospatial queries for an iOS app, for a group project in a class (video).
- **SouffléTutor.** Built a voice-controlled guide on iOS for making a soufflé, using the Nuance speech API, Pocketsphinx, and a naive Bayes classifier (video).
- **Twitter LSI** Built a Python web app using the LSI implementation in Gensim to plot Twitter search results in two dimensions, so that similar tweets cluster visually (screenshot).