ALLISON JUNE BARLOW CHANEY

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213.220.0707

Research Interests Machine learning, Bayesian statistics, computational social science, recommendation systems, text analysis (topic models), interactive and static visualization.

Education

Princeton University

Ph.D., Computer Science — September 2016
Advisor: David M. Blei
Dissertation: *Computational Methods for Exploring Human Behavior*

M.A., Computer Science — January 2014
Coursework: Advanced Methods in Probabilistic Modeling, Artificial Intelligence, Interacting with Data, Applied Probabilistic Modeling

Swarthmore College

B.A., Computer Science and B.S., Engineering — 2004 – 2008
Coursework: Adaptive Robotics, Artificial Intelligence, Mobile Robotics

Experience

Postdoctoral Research Associate, Princeton University
Advisors: Barbara E. Engelhardt, Brandon Stewart — Oct. 2016 – Present

Research Assistant, Princeton University
Graduate student research; see publications below. — July 2011 – Sept. 2016
Developed a tool for browsing the output of topic models. — Sept. 2010 – July 2011

Assistant Instructor, Princeton University
Interacting with Data (COS424) — Spring 2014
Selected readings, developed and graded assignments, held office hours.
Material: Graphical models, classification, regression, dimension reduction, sequence models and HMMs, expectation maximization, scalable machine learning.

Introduction to Computer Science (COS126) — Spring 2013
Taught 4 hours of precept per week, developed exam questions, held office hours.
Material: Programming in Java; basic encryption, computer architecture, Markov models.

Research Intern, Microsoft Research — Summer 2013
Explored Nielsen TV panel data for group recommendation.

Research Intern, eBay/Hunch — Summer 2012
Explored personalized recommendation based on recent user context.

Software Engineer, Yorba Foundation — July 2009 – July 2010
Worked on Shotwell, an open-source photo organizer and editor.

Technical Director Resident, Pixar Animation Studios — July 2008 – July 2009
Prepared material from past productions for Disney themepark attractions.

Publications

Refereed Conference Articles

A. Chaney, H. Wallach, D. Blei, and M. Connelly. **Detecting and Characterizing Events**. EMNLP, 2016 (Oral presentation).

A. Chaney, D. Blei, and T. Eliassi-Rad. **A Probabilistic Model for Using Social Networks in Personalized Item Recommendation**. RecSys, 2015 (Oral presentation).

A. Chaney, M. Gartrell, J. Hofman, J. Guiver, N. Koenigstein, P. Kohli, and U. Paquet. **A Large-scale Exploration of Group Viewing Patterns**. TVX, 2014.

A. Chaney and D. Blei. **Visualizing topic models**. International AAAI Conference on Social Media and Weblogs, 2012.

Workshop and Other Papers

A. Chaney, H. Wallach, and D. Blei. **Who, What, When, Where, and Why? A Computational Approach to Understanding Historical Events Using State Department Cables**. Text as Data, 2015 (Oral presentation).

A. Chaney, K. Dinakar, H. Lieberman, and D. Blei. **Real-time Topic Models for Crisis Counseling**. KDD Workshop: Data Science for Social Good, 2014.

A. Chaney, P. Gopalan, and D. Blei. **Poisson Trust Factorization for Incorporating Social Networks into Personalized Item Recommendation**. NIPS Workshop: What Difference Does Personalization Make?, 2013.

A. Chaney, M. Gartrell, J. Hofman, J. Guiver, N. Koenigstein, P. Kohli, and U. Paquet. **Mining Large-scale TV Group Viewing Patterns for Group Recommendation**. Microsoft Tech Report, 2013.

Honors & Awards

Rising Stars in EECS (Academic Career Workshop for Women), invited participant, Carnegie Mellon University, 2016.

Honorable Mention Award (best paper runner-up) for *A Large-scale Exploration of Group Viewing Patterns*, TVX, 2014.

Invited Talks

Princeton University. Quantitative Social Science Colloquium, 2016.

Cornell University. Artificial Intelligence Seminar (CS 7790), 2016.

Rutgers University. Computer Science Colloquium, 2015.

Brigham Young University. Computer Science Colloquium, 2015.

Professional Activities

Women in Machine Learning Board Member January 2016 – Present
Women in Machine Learning Workshop Organizer 2014
Program Chair, in charge of invited and student speakers, and also mentorship program.

Journal Reviewer: Marketing Science (2014–Present); Transactions on Knowledge and Data En-

gineering (2016); Transactions on Knowledge Discovery from Data (2016); Operations Research (2015); Transactions on Interactive Intelligent Systems (2015)

Conference Reviewer: ICML (2016, 2015); ICWSM (2016, 2015); AISTATS (2016); NIPS (2015)

Workshop Reviewer: WiML (2016 Area Chair, 2014); NIPS Advances in Approximate Bayesian Inference (2015, 2016); NIPS Topic Models (2013); Mid-Atlantic Student Colloquium on Speech, Language and Learning (2011)

Technical Skills

Operating Systems: Linux, Mac OS, Windows

Programming Languages: Python, R, C/C++, Bash, SQL, CSS/HTML, Java, Javascript

Misc: LaTeX, Git, SVN, Inkscape, GIMP

Additional Skills

Languages: English Fluency, Conversational Spanish

Recent Volunteering

Employment & Education Specialist, LDS Spanish-Speaking Congregation May 2014 – Present
Teach employment workshops, provide individual career and education counseling. Developed and taught a free nine-session SAT prep class in Summer 2015.

Summer Programming Experiences Mentor, Princeton Computer Science Summer 2015
Mentored a group of four freshman students through a programming project.

Youth Leader, Princeton LDS English-Speaking Congregation January 2013 – March 2015
Mentored, taught, tutored, and planned social events for teenage girls.