

# Linzi Xing

Homepage: <http://deanxing.net>  
Github: <https://github.com/lxing532>  
Email: [lxing@cs.ubc.ca](mailto:lxing@cs.ubc.ca)

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## RESEARCH INTERESTS

Natural Language Processing, Machine Learning, Computational Social Science, Data Mining

## EDUCATION

### UNIVERSITY OF BRITISH COLUMBIA | DOCTOR OF PHILOSOPHY IN COMPUTER SCIENCE

Sep 2018 – Now | Vancouver, BC • Cum. GPA: –/–

Advisor: Giuseppe Carenini

### UNIVERSITY OF COLORADO BOULDER | MS IN COMPUTER SCIENCE

Aug 2018 – May 2018 | Boulder, CO • Cum. GPA: 3.88/4.0

Advisor: Michael J. Paul | Thesis: Analyzing Posterior Variability in Topic Models

Committee Members: Michael J. Paul (chair), Qin Lv, Chenhao Tan

### SOOCHOW UNIVERSITY | BS IN MANAGEMENT INFORMATION SYSTEM

Sep 2012 – June 2016 | Suzhou, China • Cum. GPA: 3.70 / 4.0 (1/40)

Advisor: Li Zhang | Thesis: Application of Sparse Representation Classifier on Cancer Gene Data

### UNIVERSITY OF WISCONSIN MADISON | VISITING STUDENT IN COMPUTER SCIENCE

Aug 2015 – Dec 2015 | Madison, WI • Cum. GPA: 3.75/4.0

## PUBLICATIONS

### ADJUSTING FOR POSTERIOR VARIABILITY IN PROBABILISTIC DOCUMENT REPRESENTATIONS

Linzi Xing and Michael J. Paul

Under Review

### DIAGNOSING AND IMPROVING TOPIC MODELS BY ANALYZING POSTERIOR VARIABILITY

Linzi Xing and Michael J. Paul

The Thirty-Second AAAI Conference on Artificial Intelligence (AAAI-18), New Orleans, USA. February 2018

### INCORPORATING METADATA INTO CONTENT-BASED USER EMBEDDINGS

Linzi Xing and Michael J. Paul

EMNLP Workshop on Noisy User-generated Text (W-NUT), Copenhagen, Denmark. September 2017

### EXPLORING TIMELINES OF CONFIRMED SUICIDE INCIDENTS THROUGH SOCIAL MEDIA

Xiaolei Huang, Linzi Xing, Jed R. Brubaker, Michael J. Paul

IEEE International Conference on Healthcare Informatics (ICHI), Park City, Utah. August 2017

## RESEARCH EXPERIENCES

### RESEARCH ASSISTANT | COLLEGE OF MEDIA, COMMUNICATION AND INFORMATION

Summer 2017 | Boulder, CO | Supervisor: Michael J. Paul

- Investigated what kinds of characteristics about topics can be learned from the posterior of the parameters, like how LDA topic parameters change across different posterior samples during Gibbs sampling process.
- Proposed new methods to diagnose and improve LDA topic quality by taking advantage of the posterior samples fluctuation during Gibbs sampling process.
- Re-implemented codes about topic quality evaluation and topic alignment mentioned in other referenced papers with Python and designed the analytical experiments about this project.
- Lead to a paper accepted by AAAI-18 Conference.

### INDEPENDENT STUDY | COMPUTER SCIENCE DEPARTMENT

Jan 2017 – May 2017 | Boulder, CO | Supervisor: Michael J. Paul

- Proposed a data augmentation method that allowed novel feature types to be used within off-the-shelf embedding models such as paragraph2vec.
- Collected 5000 Twitter users' Tweets posted during January 2017 and their profiles using Twitter REST and Streaming API. Preprocessed data with state-of-the-art tools like Carmen.
- lead to a paper accepted by W-NUT(2017) workshop.

## **UNDERGRAD RESEARCHER | RESEARCH LAB OF MACHINE LEARNING**

Apr 2014 – Aug 2015 | Soochow University, Suzhou, China | Supervisor: Li Zhang

- Assisted in designing a classifier to classify individual gene data to the correct class using the Sparse Representation Method. This project was recognized as key project.
- Applied Sparse Representation method on Tweets and designed relative efficient predictor to detect information missed in Twitter users' profiles, like geolocation.
- Did some research about the Group Sparse Coding Method and Nonlinear Nearest Subspace Classifier.

## TEACHING EXPERIENCES

### **CPSC 422 - INTELLIGENT SYSTEMS | UBC**

Teaching Assistant | 2018 Winter Term 1 | Vancouver, BC

### **CPSC 121 - MODELS OF COMPUTATION | UBC**

Teaching Assistant | 2018 Winter Term 2 | Vancouver, BC

### **CPSC 503 - COMPUTATIONAL LINGUISTICS I | UBC**

Teaching Assistant | 2018 Winter Term 2 | Vancouver, BC

## PROFESSIONAL EXPERIENCES

### **SOFTWARE ENGINEERING INTERN | LKHEALTH.CN**

Spring 2016 | Suzhou, China

- Contributed to the project on-line pharmacy with Yii (a PHP framework) and built a simple back-end framework which was used to retrieve pharmacies' events and activities.
- Adjusted the template style in the views which were generated by default in Gii and redesigned some views to make them more user-friendly.
- Designed and adjusted some front-end pages' styles adopted from Bootstrap.

## AWARDS/HONORS

### **DOCTORAL RECRUITMENT SCHOLARSHIP | UNIVERSITY OF ALBERTA**

Declined

Apr 2018 | Edmonton, Alberta

### **OUTSTANDING GRADUATES | SOOCHOW UNIVERSITY**

May 2016 | Suzhou, China

### **OUTSTANDING UNDERGRAD STUDENT SCHOLARSHIP | CHINA SCHOLARSHIP COUNCIL(CSC)**

Apr 2015 | Beijing, China

### **CW CHU SCHOLARSHIP | SOOCHOW UNIVERSITY**

Oct 2014 | Suzhou, China | Top 1% Academic Excellence

## SKILLS

### **PROGRAMMING SKILLS**

Python • MATLAB • Java •  $\LaTeX$

### **WEB RELATED**

HTML/CSS • Javascript • d3.js • dc.js • PHP

### **OTHER TOOLS**

NLTK • Gensim • Scipy • Tensorflow