

# Linzi Xing

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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 • GPA: 88%/100%

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

### **IMPROVING CONTEXT MODELING IN NEURAL TOPIC SEGMENTATION**

Linzi Xing, Brad Hackinen, Giuseppe Carenini and Francesco Trebbi

The 1st Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics and the 9th International Joint Conference on Natural Language Processing (AACL-IJCNLP 2020), December 2020

### **MULTILINGUAL TWITTER CORPUS AND BASELINES FOR EVALUATING DEMOGRAPHIC BIAS IN HATE SPEECH RECOGNITION**

Xiaolei Huang, Linzi Xing, Michael J. Paul and Franck Dernoncourt

The 12th International Conference on Language Resources and Evaluation (LREC 2020), Marseille, France. May 2020

### **EVALUATING TOPIC QUALITY WITH POSTERIOR VARIABILITY**

Linzi Xing, Michael J. Paul and Giuseppe Carenini

The 2019 Conference on Empirical Methods in Natural Language Processing and 9th International Joint Conference on Natural Language Processing (EMNLP-IJCNLP 2019), Hong Kong, China. November 2019

### **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, 2019 Winter Term 2 | Vancouver, BC

### **CPSC 322 - INTRODUCTION TO ARTIFICIAL INTELLIGENCE | UBC**

Teaching Assistant | 2019 Summer Term 1 | Vancouver, BC

### **APSC 160 - INTRODUCTION TO COMPUTATION IN ENGINEERING DESIGN | UBC**

Teaching Assistant | 2019 Winter Term 1 | 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 •  $\text{\LaTeX}$

### WEB RELATED

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

### OTHER TOOLS

NLTK • Gensim • Scipy • Pytorch