

Linzi Xing

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I am a final year Ph.D. candidate in the NLP group at the University of British Columbia. My primary research interests lie in the area of natural language processing (NLP) and machine learning (ML), with a focus on designing and implementing computational models to better understand natural language in various forms. In particular, my research experience during my master's and Ph.D. journey spans domains of topic segmentation, topic modeling, text summarization, discourse parsing, and large language models.

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| EDUCATION | Ph.D. in Computer Science University of British Columbia (UBC), Vancouver, BC <i>Advisor:</i> Giuseppe Carenini <i>Committee:</i> Giuseppe Carenini, Raymond Ng, Laks V.S. Lakshmanan | 2018 - 2023 (Expected) |
| | M.S. in Computer Science University of Colorado, Boulder, CO <i>Advisor:</i> Michael J. Paul <i>Committee:</i> Michael J. Paul, Qin Lv, Chenhao Tan | 2016 - 2018 |
| | B.S. in Management Information System Soochow University, Suzhou, CN <i>Advisor:</i> Li Zhang | 2012 - 2016 |
| | Visiting Student in Computer Science University of Wisconsin, Madison, WI | 2015 |
| PROFESSIONAL EXPERIENCE | University of British Columbia , Research Assistant <i>with Giuseppe Carenini</i> <ul style="list-style-type: none">• Neural topic segmentation for monologue/dialogue text.• Synergy between discourse parsing and topic segmentation.• Demoting lead bias in neural extractive summarization. Huawei Technologies Canada , NLP Researcher Intern <i>with Zhenan Fan</i> <ul style="list-style-type: none">• Large Language Models (LLMs) on linear programming modeling. Adobe Inc. , Research Scientist Intern <i>with Quan Tran</i> <ul style="list-style-type: none">• Generating semantic timelines for long livestream videos. University of Colorado Boulder , Research Assistant <i>with Michael J. Paul</i> <ul style="list-style-type: none">• Diagnosing and improving quality of probabilistic topic models.• Incorporating Metadata for better user embeddings. | 2019 - present 2023 2022 2017 |

PUBLICATIONS  [Google Scholar](#)

Pre-Prints (in submission)

- U.1 **Linzi Xing**, Brad Hackinen, and Giuseppe Carenini
[Tracing Influence at Scale: A Contrastive Learning Approach to Linking Public Comments and Regulator Responses](#)
- U.2 **Linzi Xing**, and Giuseppe Carenini
[Language Models for Dialogue Topic Segmentation: A Comparative Study](#)
- U.3 **Linzi Xing**, Quan Tran, Fabian Caba, Franck Dernoncourt, Seunghyun Yoon, Zhaowen Wang, Trung Bui and Giuseppe Carenini
[Decoding the Hidden Semantics of Videos: Multi-Modal Video Topic Segmentation with Dual-Contrastive Domain Adaptation](#)

Peer-reviewed Conference and Journal Publications (* indicates joint first authorship)

- P.1 Rindra Ramamonjison, Timothy Yu, **Linzi Xing**, Mahdi Mostajabdaveh, Xiaorui Li, Xiaojin Fu, Xiongwei Han, Yuanzhe Chen, Ren Li, Kun Mao, and Yong Zhang
[TeX2Solver: a Hierarchical Semantic Parsing of TeX Document into Code for an Assistive Optimization Modeling Application](#)
In Proceedings of the 61st Annual Meeting of Association for Computational Linguistics (ACL 2023: Demo).
- P.2 Raymond Li, Felipe Gonzalez-Pizarro, **Linzi Xing**, Gabriel Murray and Giuseppe Carenini
[Diversity-Aware Coherence Loss for Improving Neural Topic Models](#)
In Proceedings of the 61st Annual Meeting of Association for Computational Linguistics (ACL 2023: Short).
- P.3 Patrick Huber*, **Linzi Xing***, and Giuseppe Carenini
[Predicting Above-Sentence Discourse Structure using Distant Supervision from Topic Segmentation](#)
In Proceedings of the 36th AAAI Conference on Artificial Intelligence (AAAI-22) [Acc rate: 15%].
- P.4 Raymond Li, Wen Xiao, **Linzi Xing**, Lanjun Wang, Gabriel Murray and Giuseppe Carenini
[Human Guided Exploitation of Interpretable Attention Patterns in Summarization and Topic Segmentation](#)
In Proceedings of the findings of 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP 2022).
- P.5 **Linzi Xing**, and Giuseppe Carenini
[Improving Unsupervised Dialogue Topic Segmentation with Utterance-Pair Coherence Scoring](#)
In Proceedings of the 22nd Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDIAL 2021) [Acc rate: 41.5%].
- P.6 **Linzi Xing***, Wen Xiao*, and Giuseppe Carenini
[Demoting the Lead Bias in News Summarization via Alternating Adversarial Learning](#)
In Proceedings of the 59th Annual Meeting of the Association for Computational Linguistics (ACL 2021: Short) [Acc rate: 21.3%].
- P.7 **Linzi Xing**, Brad Hackinen, Giuseppe Carenini, and Francesco Trebbi
[Improving Context Modeling in Neural Topic Segmentation](#)
In Proceedings of the 1st Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics (AACL 2020) [Acc rate: 28.3%].
- P.8 Xiaolei Huang, **Linzi Xing**, Franck Dernoncourt, and Michael J. Paul
[Multilingual Twitter Corpus and Baselines for Evaluating Demographic Bias in Hate Speech Recognition](#)
In Proceedings of the 12th Language Resources and Evaluation Conference (LREC 2020).

- P.9 **Linzi Xing**, Michael J. Paul, and Giuseppe Carenini
[Evaluating Topic Quality with Posterior Variability](#)
 In Proceedings of the 2019 Conference on Empirical Methods in Natural Language Processing (EMNLP 2019: Short) [Acc rate: 23.8%].
- P.10 **Linzi Xing**, and Michael J. Paul
[Diagnosing and Improving Topic Models by Analyzing Posterior Variability](#)
 In Proceedings of the 32nd AAAI Conference on Artificial Intelligence (AAAI-18) [Acc rate: 25%].
- P.11 Xiaolei Huang, **Linzi Xing**, Jed R. Brubaker, and Michael J. Paul
[Exploring Timelines of Confirmed Suicide Incidents through Social Media](#)
 In Proceedings of the 5th IEEE International Conference on Healthcare Informatics (ICHI 2017).

Posters and Workshop Papers

- W.1 **Linzi Xing**, Patrick Huber and Giuseppe Carenini
[Improving Topic Segmentation by Injecting Discourse Dependencies](#)
 In Proceedings of the 3rd Workshop on Computational Approaches to Discourse (CODI 2022).
- W.2 **Linzi Xing**, and Michael J. Paul
[Incorporating Metadata into Content-Based User Embeddings](#)
 In Proceedings of the 3rd Workshop on Noisy User-generated Text (WNUT 2017).

ACADEMIC SERVICE

Paper Reviewing

ACL Rolling Review (ARR), ACL 2023, AAAI 2022-2024, EMNLP 2021-2023, EACL 2021, Journal of Natural Language Engineering (NLE), Journal of Artificial Intelligence

Program Committees

- Workshop on New Frontiers in Summarization (@EMNLP 2023)
- Workshop on Automatic Summarization for Creative Writing (@COLING 2022)
- Workshop on New Frontiers in Summarization (@EMNLP 2021)
- Workshop on New Frontiers in Summarization (@EMNLP 2019)

TEACHING EXPERIENCE

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|---|-------------|
| CPSC 503 - Computational Linguistic I | 2019 - 2021 |
| As teaching assistant, University of British Columbia | |
| CPSC 436N - Topics in Computer Science: NLP | 2021 |
| As course developer, University of British Columbia | |
| CPSC 322 - Introduction to Artificial Intelligence | 2019 |
| As teaching assistant, University of British Columbia | |
| CPSC 121 - Models of Computation | 2019 |
| As teaching assistant, University of British Columbia | |
| CPSC 422 - Intelligent Systems | 2018 |
| As teaching assistant, University of British Columbia | |

AWARDS & GRANTS

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| President's Academic Excellence Initiative Ph.D. Award , UBC | 2020 - 2022 |
| Dean's List , Soochow University | 2016 |
| Outstanding Undergrad Student Scholarship , China Scholarship Council (CSC) | 2015 |

C.W. Chu Scholarship (Top 1% Academic Excellence), Soochow University

2014

REFERENCES

References available upon request.