Zhengxiang Wang

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EDUCATION

Stony Brook University Stony Brook, NY

Ph.D. in Computational Linguistics. Advisors: Owen Rambow, Jeffrey Heinz

Aug 2022 - Present

University of Saskatchewan Saskatoon, Canada

M.A. in Applied Linguistics. Advisor: Zhi Li

Sep 2019 – May 2021

Hunan University Changsha, China

B.A. in Chinese Language and Literature Sep 2015 – Jun 2019

Publications & Manuscripts

Book Chapter

1. Wang, Z. (To appear). Probabilistic Linguistic Knowledge and Token-level Text Augmentation. In *Practical solutions for Diverse Real-World NLP Applications*. Springer book series Signals and Communication Technology.

Articles

- 1. Li, Z., Makarova, V. & Wang, Z. (2023). Developing Literature Review Writing Skills through an Online Writing Tutorial Series: Corpus-based Evidence. Frontiers in Communication.
- 2. Hao, H., Cui, Y., Wang, Z. & Kim, Y. (2022). Thirty-Two Years of IEEE VIS: Authors, Fields of Study and Citations. *IEEE Transactions on Visualization and Computer Graphics*.
- 3. Peng, L., & Wang, Z. (2017). The Contemporary Reflection on the Sentence-based Theory Postulated by New Grammar of Modern Chinese. *Journal of Hengyang Normal University*.

Proceedings

- 1. Wang, Z. (2023). Learning Transductions and Alignments with RNN Seq2seq Models. Proceedings of the 16th International Conference on Grammatical Inference. In Proceedings of Machine Learning Research, Volume 217.
- 2. Wang, Z. (2022). Linguistic Knowledge in Data Augmentation for Natural Language Processing: An Example on Chinese Question Matching. Proceedings of the 5th International Conference on Natural Language and Speech Processing.
- 3. Wang, Z. (2022). Random Text Perturbations Work, but not Always. Proceedings of the 3rd Workshop on Evaluation and Comparison of NLP Systems (co-located at AACL 2022).

Manuscripts

- 1. Wang, Z. (2021). A Macroscopic Re-examination of Language and Gender: A Corpus-based Case Study in University Instructor Discourses. MA Dissertation, University of Saskatchewan.
- 2. Wang, Z. (2019). Analysis on the quantitativeness of reduplication in Modern Mandarin. BA Dissertation (in Chinese), Hunan University.
- 3. Wang, Z. (2017-2019). Grammar as science: Rethinking the construction of Modern Chinese Grammar. Granted project (outcomes are 99 pages/11 papers in Chinese) for the National Student Innovation Training Program.

AWARDS & HONORS

 Distinguished Travel Award, Graduate Student Organization Professional Development Award, Graduate Student Employees Union 	വരാ
Professional Development Award Graduate Student Employees Union	2023
1 Totossional Bovelopinent Tiwara, Gradano Statem Employees emon	2023
• Mitacs Globalink Graduate Fellowship, Mitacs	2019
• Excellent Graduate of the year, Hunan University	2019
• Chinese Government Scholarship, China Scholarship Council	2018
• The First-Class Scholarship, Hunan University	2017, 2018
• National Student Innovation Training Program Grant, Ministry of Education of Cl	hina 2017
• Triple-A student, Hunan University	2016
• National Scholarship, Ministry of Education of China	2016
Research Experience	
• BIAS-NRT Trainee, Stony Brook University NSF-funded project aimed to detect and address bias in data, humans, and institutions.	May 2023 – Present
• Research Assistant, under Owen Rambow, SUNY Research Foundation DARPA-funded project: Influence Campaigns Awareness and Sensemaking (INCAS).	May 2023 – Present
• Research Assistant, under Veronika Makarova & Zhi Li, University of Saskatchewan Assessing the development of Academic ESL Writing by international graduate students.	May 2020 — Jun 2021
• Research Assistant, under Benjamin V. Tucker, University of Alberta Phonological perceptions of Chinese English learners for reduced English sounds.	Summer 2018
Teaching Employment	
• Summer Youth Camp in Computational Linguistics. Secondary Instructor Organizer: Jeffrey Heinz, Stony Brook University	Aug 2023
• LIN335: Computational Linguistics. Teaching Assistant Instructor: Jordan Kodner. Stony Brook University.	Spring 2023
• LIN120: Language and Technology. Teaching Assistant Instructor: Owen Rambow. Stony Brook University.	Fall 2022
Certificates	
• Machine Learning Specialization, Deeplearning.AI	2022
• Practical Data Science on the AWS Cloud, Deeplearning.AI	2022

SKILLS

• Programming: Python, R, LATEX, Octave, HTML, C/C++, Haskell, Bash

• Deep Learning Based Natural Language Processing, Baidu Paddle Paddle

- Frameworks: PyTorch, TensorFlow, Keras, PaddlePaddle, NumPy, Jax, scikit-learn
- Cloud Computing: AWS, Baidu AI Studio, Google Colab
- Languages: Mandarin, English, Fuqing Dialect

• Deep Learning Specialization, Deeplearning.AI

• Machine Learning, Stanford Online

2021

2021

2021

Presentations

Talks

- 1. Wang, Z. July 2023. Learning Transductions and Alignments with RNN Seq2seq Models. The 16th International Conference on Grammatical Inference (ICGI), Rabat, Morocco.
- 2. Wang, Z. March 2023. Understanding how RNN seq2seq models learn alignment. SYNC (STONY BROOK, YALE, NYU, CUNY Linguistics Conference) 2023, Yale University.
- 3. Wang, Z. December 2022. Linguistic Knowledge in Data Augmentation for Natural Language Processing: An Example on Chinese Question Matching. The 5th International Conference on Natural Language and Speech Processing, Online.
- 4. Wang, Z. October 2022. Random Text Perturbations Work, but not Always. The 3rd Workshop on Evaluation and Comparison of NLP Systems (co-located at AACL 2022), Online.

Posters

- 1. Wang, Z. April 2023. Exploring RNN Seq2seq Models via Transduction Tasks that Require Alignments. The 10th Mid-Atlantic Student Colloquium on Speech, Language and Learning (MASC-SLL 2023), George Mason University.
- 2. Wang, Z. April 2023. Probing the learning capabilities of RNN seq2seq models. IACS (Institute for Advanced Computational Science) Research Day, Stony Brook University.
- 3. Wang, Z. March 2023. Probing the learning capabilities of RNN seq2seq models. The 47th Penn Linguistics Conference, University of Pennsylvania.
- 4. Wang, Z., Tucker, B. V. & Mukai, Y. August 2018. How does Chinese learner of English perceive and comprehend phonetic reduction? Summer Poster Symposium, University of Alberta.

SERVICE

• Skillz Hour organizer Linguistics Department, Stony Brook University	Sep 2023 – Present
• Student organizer Mathematical Linguistics Reading Group, Stony Brook University	Aug 2022 – May 2023
• ESL classroom volunteer The Global Gathering Place, Saskatoon	Dec 2019 – Mar 2020
• Co-founder and president Hunan University Student Ambassadors Association, Hunan University	May 2016 – Jun 2019
• Student organizer University of Regina's China Study Tour (4 weeks), Hunan University	May 2019
• Volunteer and interpreter UNESCO conference "Role of linguistic diversity" (3 days), Changsha	Sep 2018