Xintong Wang

Last update: October 1st, 2024

EDUCATION

University of Hamburg

Ph.D. in Computer Science, Advisor: Prof. Dr. Chris Biemann

Hamburg, Germany Apr. 2021 - Apr. 2026

- Thesis: "Multimodal Representation Learning: Understanding and Leveraging"

South China University of Technology

M.S. in Computer Science, GPA: 3.70/4.00, Advisor: Prof. Dr. Jianming Lv

Guangzhou, China Sept. 2016 - July 2019

- Thesis: "Research on Abstractive Summarization"

South China University of Technology

B.S. in Computer Science, GPA: 3.40/4.00

- Thesis: "Spatio-temporal Data Storage and Mining Systems"

Guangzhou, China Sept. 2012 - June 2016

EXPERIENCE

The Chinese Academy of Sciences

Beijing, China

Visiting Researcher, Advisor: Prof. Dr. Xingshan Li and Prof. Dr. Qingqing Qu

Dec. 2022 - Mar. 2023

- Language Models

- Understand Language Models from Cognition Perspective: Regression and Prediction

University of Hamburg

Hamburg, Germany

Research Associate, Advisor: Prof. Dr. Chris Biemann

May 2020 - Mar. 2021

- Cross-modal Learning

- Cross-modal Learning for Improving Human Learning to Read

The Hong Kong Polytechnic University

Research Assistant, Advisor: Prof. Dr. Wenjie Li

Hong Kong, China

Oct. 2018 - Aug. 2019

Summarization

- Fusing External Language Models in the Abstractive Summarization

The Chinese Academy of Sciences

Shenzhen, China

Visiting Student Researcher, Advisor: Prof. Dr. Min Yang

Mar. 2018 - Oct. 2018

Summarization

- Generative Adversarial Network for Abstractive Text Summarization with Multi-task Constraint

PUBLICATIONS

- Xintong Wang, Jingheng Pan, Longqin Jiang, and Chris Biemann, "Uncertainty-Aware Contrastive Decoding for Mitigating Ambiguity and Off-Target Issues in Multimodal Machine Translation", Ongoing Project. October 2024 [LVLM Multimodal&Multilingual]
- 2. **Xintong Wang**, Jingheng Pan, Longqin Jiang, Liang Ding, Xingshan Li, and Chris Biemann, "CogSteer: Cognition-Inspired Selective Layer Intervention for Efficient Semantic Steering in Large Language Models", arxiv Preprint. October 2024 [LLM Interpretability&Efficiency&Safety]
- 3. Xintong Wang, Yixiao Liu, Jingheng Pan, and Chris Biemann, "Mitigating Biases in Chinese Toxic Language via Sentiment Polarity Consistent Rewrites: Benchmark and Evaluation", arxiv Preprint. October 2024 [LLM Benchmark&Safety]

- 4. Daryna Dementieva, Daniil Moskovskiy, Nikolai Babakov, Abinew Ali Ayele, Naquee Rizwa, Florian Schneider, Xintong Wang, Seid Muhie Yimam, Dmitry Ustalov, Elisei Stakovskii, Alisa Smirnova, Ashraf Elnagar, Animesh Mukherjee and Alexander Panchenko, "Multilingual and Explainable Text Detoxification with Parallel Data", arxiv Preprint. September 2024 [LLM Multilingual&Safety]
- Xintong Wang, Jingheng Pan, Liang Ding, and Chris Biemann, "Mitigating Hallucinations in Large Vision-Language Models with Instruction Contrastive Decoding", Findings of the Association for Computational Linguistics (ACL). August 2024 (Core Rank A* and CCF-A) [LVLM Hallucination]
- 6. Abinew Ali Ayele, Nikolay Babakov, Janek Bevendorff, Xavier Bonet Casals, Berta Chulvi, Daryna Dementieva, Ashaf Elnagar, Dayne Freitag, Maik Fröbe, Damir Korenčić, Maximilian Mayerl, Daniil Moskovskiy, Animesh Mukherjee, Alexander Panchenko, Martin Potthast, Francisco Manuel Rangel, Naquee Rizwan, Paolo Rosso, Florian Schneider, Alisa Smirnova, Efstathios Stamatatos, Elise Stakovskii, Benno Stein, Mariona Taulé, Dmitry Ustalov, Xintong Wang, Matti Wiegmann, Seid Muhie Yimam and Eva Zangerle (authors are listed in alphabetical order), "Overview of PAN 2024: Multi-Author Writing Style Analysis, Multilingual Text Detoxification, Oppositional Thinking Analysis, and Generative AI Authorship Verification", Proceedings of the 15th International Conference of the Cross-Language Evaluation Forum for European Languages (CLEF 2024). September 2024 [LLM Benchmark&Multilingual&Safety]
- 7. Daryna Dementieva, Daniil Moskovskiy, Nikolai Babakov, Abinew Ali Ayele, Naquee Rizwa, Florian Schneider, Xintong Wang, Seid Muhie Yimam, Dmitry Ustalov, Elisei Stakovskii, Alisa Smirnova, Ashraf Elnagar, Animesh Mukherjee and Alexander Panchenko, "Overview of the Multilingual Text Detoxification Task at Pan 2024", Proceedings of the 2024 Working Notes of the Conference and Labs of the Evaluation Forum (CLEF 2024). September 2024 [LLM Benchmark&Multilingual&Safety]
- 8. Xintong Wang, Xiaoyu Li, Xingshan Li, and Chris Biemann, "Probing Large Language Models from A Human Behavioral Prospective", Proceedings of the Bridging Neurons and Symbols for Natural Language Processing and Knowledge Graphs Reasoning at 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (NeusymBridge at LREC-COLING). May 2024 [LLM Interpretability]
- 9. Xintong Wang, Xiaoyu Li, Liang Ding, Sanyuan Zhao, and Chris Biemann, "Using Self-Supervised Dual Constraint Contrastive Learning for Cross-modal Retrieval", Proceedings of the 26th European Conference on Artificial Intelligence (ECAI). September 2023 (Core Rank A and CCF-B) [LVLM Efficient Fine-tuning]
- 10. Anton Orell Wiehe, Florian Schneider, Sebastian Blank, **Xintong Wang**, Hans-Peter Zorn, and Chris Biemann, "Language over Labels: Contrastive Language Supervision Exceeds Purely Label-Supervised Classification Performance on Chest X-Rays", *Proceedings of the 2022 Asia-Pacific Chapter of the Association for Computational Linguistics: Student Research Workshop (SRW at AACL-IJCNLP). November 2022 [LVLM Efficient Fine-tuning]*
- 11. **Xintong Wang***, Florian Schneider*, Özge Alacam, Prateek Chaudhury, Chris Biemann, "MOTIF: Contextualized Images for Complex Words to Improve Human Reading", *Proceedings of the 13th Edition of its Language Resources and Evaluation Conference (LREC). June 2022 (Core Rank B) [LVLM Benchmark&Interpretability]*
- 12. Florian Schneider, Özge Alacam, **Xintong Wang**, and Chris Biemann, "Towards Multi-Modal Text-Image Retrieval to Improve Human Reading", *Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics: Student Research Workshop (SRW at NAACL). June 2021 [LVLM Interpretability]*
- 13. Min Yang, **Xintong Wang**, Yao Lu, Jianming Lv, Ying Shen, and Chengming Li, "Plausibility-promoting Generative Adversarial Network for Abstractive Text Summarization with Multi-task Constraint", *Information Sciences*, 521 (2020): 46-61 (Core Rank A and JCR-Q1) [NLP Summarization]
- 14. Jianming Lv, and **Xintong Wang**, "Cross-dataset Person Re-identification using Similarity Preserved Generative Adversarial Networks", *Proceedings of the 11th International Conference on Knowledge Science*, Engineering and Management (KSEM), August 2018 (Core Rank B) [CV GAN]
- 15. Jianming Lv, Qing Li, Qinghui Sun, and **Xintong Wang**, "T-CONV: A Convolutional Neural Network for Multi-scale Taxi Trajectory Prediction", *Proceedings of the 2018 IEEE International Conference on Big Data and Smart Computing (BigComp)*, January 2018 [CV Spatial-temporal]
- 16. Haitao Yang, Jianming Lv, Fei Xu, **Xintong Wang**, Yilin Huang, Lanting Xia, and Xuewu Zhu, "Regression Approach for Optimal Purchase of Hosts Cluster in Fixed Fund for Hadoop Big Data Platform", *Proceedings of the 19th International Conference on Smart City, Transportation and Buildings, June 2017* [Distributed System]

- 17. Jianming Lv, **Xintong Wang**, Fengtao Huang, Junjie Yang, Tianfeng Wu, and Qifa Yan, "TREST: A Hadoop Based Distributed Mobile Trajectory Retrieval System", *Proceedings of the 2016 IEEE First International Conference on Data Science in Cyberspace (DSC)*, June 2016 [Distributed Computing]
- 18. Haibiao Lin, Jianming Lv, Can Yang, Miaoyi Deng, Kaitao Wang, and **Xintong Wang**, "GPS Trajectory Mining: A Survey", Journal of Computational Information Systems, 16 (2014): 6947–6956 [Spatial-temporal]

INVITED TALKS

•	Towards Truthfulness, Safeness, and Explainable Foundation Models Host: Prof. Dr. Xingshan Li, Institute of Psychology, Chinese Academy of Sciences	08.2024
•	Mitigating Hallucinations in Large Vision-Language Models (LVLMs) $Online\ Talk$	07.2024
•	Probing Large Language Models (LLMs) for Predicting Human Behavioral Data Hosts: Prof. Dr. Markus Hofmann and Prof. Dr. Ralph Radach, Universität Wuppertal	05.2023

TEACHING

• Instructor at University of Hamburg	Summer 2025
Master Course: Exercises Statistical Methods of Language Technology	
• Project Mentor at University of Hamburg Master Project: Web Interfaces for Language Processing Systems	Summer 2022/2023
• Co-Lecturer at University of Hamburg	Winter $2020/2024$
Master Course: Natural Language Processing and the Web	

SUPERVISION

Master Theses	
• Jingheng Pan MSc, at Universität Hamburg Thesis: Compositional Understanding and Reasoning in Large Vision-Language Models	01.04.2025
• Xiaoyu Li MSc, at Technische Universität Berlin & Beijing Institute of Technology Thesis: Methods towards Understanding and Application of Foundation Models	06.03.2024
• Fabian Meyer MSc, at Universität Hamburg Thesis: On the Potential and Limits of Zero-Shot Out-of-Distribution of Detection	16.04.2023
• Anton Orell Wiehe MSc, at Universität Hamburg Thesis: Domain Adaptation for Multi-Modal Foundation Models	10.07.2022
• Matthew Ng Cher-Wai MSc, at Universität Hamburg Thesis: Multi-Modal Fictional Backstory Generation using Transformer-Aspect-Backstory Generator	06.06.2022
• Ankit Srivastava MSc, at Universität Hamburg Thesis: Complex Word Identification for Language Learners	13.03.2022
• Florian Schneider MSc, at Universität Hamburg Thesis: Self-Supervised Multi-Modal Text-Image Retrieval Methods to Improve Human Reading GSCL Best Master's Thesis Award 2023	27.07.2021
Research Assistants & Interns	

• Longqin Jiang MSc, at Universität Hamburg, Hamburg, Germany

Topic: Uncertainty-Aware Methods for Alleviating Ambiguity in Multimodal Translation

• Yixiao Liu MSc, at Nanyang Technological University, Singapore City, Singapore

01.05.2024 - Current

01.10.2023 - Current

Topic: Mitigating Biases in Large Language Models • Jingheng Pan MSc, at Universität Hamburg, Hamburg, Germany 15.09.2023 - Current Topic: Mitigating Hallucinations in Large Vision-Language Models • Xiaoyu Li MSc, at Technische Universität Berlin, Berlin, Germany 01.10.2022 - 30.09.2023Topic: Dual Constraint Contrastive in Cross-modal Retrieval • Prateek Chaudhury BSc, at Indian Institute of Technology Delhi, New Delhi, India 01.06.2021 - 31.08.2021Topic: Reading Material Analysis for Second Language Learners

PROJECTS

SFB TRR 169 Project C7: Crossmodal Learning for Improving Human Reading Funded by German Research Foundation (DFG): 05.2020 - 12.2024, Doctoral Researcher (Core Participant)

SCHOLARSHIPS AND AWARDS

• 26th European Conference on Artificial Intelligence (ECAI 2023), Travel Grant	2023
• The 58th Annual Meeting of the Association for Computational Linguistics (ACL 2020), D&I Grant	2020
• South China University of Technology, Graduate Research Scholarships	2016-2019
• South China University of Technology, Bachelor Scholarships	2013-2016
• Tencent Research Scholarship	2016
• Outstanding Winner of Pearl River Delta+ National College Students Innovation Contest, Team Leader	2015
• Honorable Mention of International Mathematical Contest In Modeling Certificate of Achievement	2015

Professional Activities	
• Organizer and Task Committee: CLEF-2025 SemEval Task Multilingual Text Detoxification	2024
• Organizer and Task Committee: CLEF-2024 SemEval Task Multilingual Text Detoxification	2023
• Session Chair: ECAI 2023 Technical Sessions Speech and Natural Language Processing	2023
• Conference Reviewer: ACL, EMNLP, NAACL, COLING, AISTATS Multimodal Learning	2025
• Conference Reviewer: ACL, EMNLP, NAACL, LREC-COLING, ECCV, ACM MM, NeurIPS Multimodal Learning, Interpretability and Analysis of Models for NLP, Integrated Systems and Applications	2024
• Conference Reviewer: ACL, EMNLP, NAACL, EACL, IJCNLP-AACL, CVPR, ACM MM, ECAI Multimodal Learning, Sentiment Analysis, Stylistic Analysis, and Argument Mining	2023
• Conference Reviewer: ACL, EMNLP, EACL, IJCNLP-AACL Cognitive Modeling and Psycholinguistics, Summariaztion, Multimodal	2022
• Conference Reviewer: ACL, NAACL, IJCAI/Senior Program Committee, KONVENS/Program Committee Summarization, Generation, Crossmodal Learning, Multilingual Hate Speech	2021
• Conference Reviewer: ACL, EMNLP, IJCNLP-AACL Summarization, Generation, Multidisciplinary	2020
• Conference Reviewer: EMNLP, NLPCC Summarization, Conversational Bot/QA/IR/Dialogue	2019

Reviewer for ACL Rolling Review (ARR)
 Crossmodal Learning, Machine Translation
 Reviewer for Journal TALLIP
 2020–2021
 Natural Language Processing
 Reviewer for Journal IEEE Access
 2020–2021
 Computer Vision, Natural Language Processing

SKILLS

• Programming Languages: Python, Java, C++, C

• Toolkit for Deep Learning: PyTorch, TensorFlow, Numpy, Pandas, Matplotlib, NLTK, spaCy, Scikit-learn

LANGUAGES

• Chinese: Native speaker

• English: Highly proficient in spoken and written (C1)

• German: Basic communication skills (A2)