

# Xintong Wang

## EDUCATION

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### University of Hamburg

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

- Thesis: “Multimodal Representation Learning: Understanding and Leveraging”

Hamburg, Germany

Apr. 2021 - Apr. 2025

### South China University of Technology

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

- Thesis: “Research on Abstractive Summarization”

Guangzhou, China

Sept. 2016 - July 2019

### 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

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### The Chinese Academy of Sciences

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

- Language Models
- Understand Language Models from Cognition Perspective: Regression and Prediction

Beijing, China

Dec. 2022 - Mar. 2023

### University of Hamburg

Research Associate, Advisor: Prof. Dr. Chris Biemann

- Cross-modal Learning
- Cross-modal Learning for Improving Human Learning to Read

Hamburg, Germany

May 2020 - Mar. 2021

### The Hong Kong Polytechnic University

Research Assistant, Advisor: Prof. Dr. Wenjie Li

- Summarization
- Fusing External Language Models in the Abstractive Summarization

Hong Kong, China

Oct. 2018 - Aug. 2019

### The Chinese Academy of Sciences

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

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

Shenzhen, China

Mar. 2018 - Oct. 2018

## PUBLICATIONS

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1. **Xintong Wang**, Jingheng Pan, Longqin Jiang, Liang Ding, Xingshan Li, and Chris Biemann, “Not All Layers Needed: A Cognition-Inspired Method for Efficient Semantic Steering in Large Language Models”, arXiv preprint. 2024
2. **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. 2024
3. 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. 2024

4. **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)*
5. 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*
6. **Xintong Wang**, Xiaoyu Li, Xingshan Li, and Chris Biemann, “Probing Large Language Models from A Human Behavioral Perspective”, *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*
7. **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)*
8. 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 ACL-IJCNLP). November 2022*
9. **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)*
10. 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*
11. 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)*
12. 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)*
13. 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*
14. 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 (Best Presentation Award)*
15. 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*
16. 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*

## INVITED TALKS

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| • Towards Truthfulness, Safeness, and Explainable Advanced Foundation Models             | 08.2024 |
| <i>Host: Prof. Dr. Xingshan Li, Institute of Psychology, Chinese Academy of Sciences</i> |         |
| • Mitigating Hallucinations in Large Vision-Language Models (IvLMs)                      | 07.2024 |

- Probing Large Language Models (LLMs) for Predicting Human Behavioral Data 05.2023  
Hosts: Prof. Dr. Markus Hofmann and Prof. Dr. Ralph Radach, Universität Wuppertal

## TEACHING

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- **Teaching Assistant** at University of Hamburg Summer 2025  
*Statistical Methods of Language Technology*
- **Project Mentor** at University of Hamburg Summer 2022/2023  
*Master Project: Web Interfaces for Language Processing Systems*
- **Co-Lecturer** at University of Hamburg Winter 2020  
*Master Course: Natural Language Processing and the Web*

## SUPERVISION

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### Master Theses

- **Jingheng Pan** MSc, at Universität Hamburg 01.10.2024  
*Thesis: Compositional Understanding and Reasoning in Large Vision-Language Models*
- **Xiaoyu Li** MSc, at Technische Universität Berlin & Beijing Institute of Technology 06.03.2024  
*Thesis: Methods towards Understanding and Application of Foundation Models*
- **Fabian Meyer** MSc, at Universität Hamburg 16.04.2023  
*Thesis: On the Potential and Limits of Zero-Shot Out-of-Distribution of Detection*
- **Anton Orell Wiehe** MSc, at Universität Hamburg 10.07.2022  
*Thesis: Domain Adaptation for Multi-Modal Foundation Models*
- **Matthew Ng Cher-Wai** MSc, at Universität Hamburg 06.06.2022  
*Thesis: Multi-Modal Fictional Backstory Generation using Transformer-Aspect-Backstory Generator*
- **Ankit Srivastava** MSc, at Universität Hamburg 13.03.2022  
*Thesis: Complex Word Identification for Language Learners*
- **Florian Schneider** MSc, at Universität Hamburg 27.07.2021  
*Thesis: Self-Supervised Multi-Modal Text-Image Retrieval Methods to Improve Human Reading*  
**GSCL Best Master's Thesis Award 2023**

### Research Assistants

- **Longqin Jiang** MSc, at Universität Hamburg, Hamburg, Germany 01.05.2024 - Current  
*Topic: Trustful and Explainable Large Language Models*
- **Yixiao Liu** BSc, at Southwest University, Chongqing, China 01.10.2023 - Current  
*Topic: Mitigating Biases in Chinese Toxic Language*
- **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 - 30.09.2023  
*Topic: Dual Constraint Contrastive in Cross-modal Retrieval*
- **Prateek Chaudhury** BSc, at Indian Institute of Technology Delhi, New Delhi, India 01.06.2021 - 31.08.2021  
*Topic: Reading Material Analysis for Second Language Learners*

## PROJECTS

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- Synergy Grant: The Cultures of the Cryosphere. Infrastructures, Politics and Futures of Artificial Cooling  
Funded by European Research Council (ERC): 01.2025 - 03.2026, *Doctoral Researcher*
- SFB TRR 169 Project C7: Crossmodal Learning for Improving Human Reading  
Funded by German Research Foundation (DFG): 05.2020 - 12.2024, *Doctoral Researcher*

## SCHOLARSHIPS AND AWARDS

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- 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 2016–2016
- 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

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- Session Chair: ECAI 2023 Technical Sessions  
*Speech and Natural Language Processing* 2023
- Organizer and Task Committee: CLEF-2025 SemEval Task  
*Multilingual Text Detoxification* 2024
- Organizer and Task Committee: CLEF-2024 SemEval Task  
*Multilingual Text Detoxification* 2023
- Conference Reviewer: ACL, EMNLP, NAACL, COLING  
*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-AAACL, CVPR, ACM MM, ECAI  
*Multimodal Learning, Sentiment Analysis, Stylistic Analysis, and Argument Mining* 2023
- Conference Reviewer: ACL, EMNLP, EACL, IJCNLP-AAACL  
*Cognitive Modeling and Psycholinguistics, Summarization, 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-AAACL  
*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* 2021–2024
- Reviewer for Journal TALLIP  
*Natural Language Processing* 2020–2021
- Reviewer for Journal IEEE Access  
*Computer Vision, Natural Language Processing* 2020–2021

## SKILLS

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- **Programming Languages:** Python, Java, C++, C
- **Toolkit for Deep Learning:** PyTorch, TensorFlow, Numpy, Pandas, Matplotlib, NLTK, spaCy, Scikit-learn

## LANGUAGES

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- **Chinese:** Native speaker
- **English:** Highly proficient in spoken and written (C1)
- **German:** Basic communication skills (A2)