Wenyue Hua

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EDUCATION

Rutgers University, New Brunswick 09/2020 —
Ph.D. in Computer Science

Rutgers University, New Brunswick 09/2018 — 10/2020
Master in Arts , Linguistics

GPA: 4.0/4.0

Thesis title: Learning Underlying Representations and Phonological Grammars; Advisor: Professor Adam Jardine

University of California, Los Angeles (UCLA) 09/2014 — 06/2018
BS in Mathematics, General & BA in Linguistics&Philosophy with Specialization in Computing

· GPA: 3.75/4.0

SELECTED PUBLICATIONS

[1] (under progress) Shuhang Lin*, **Wenyue Hua***, Hang Hua, Jianchao Ji, Lizhou Fan, Lingyao Li, Jiebo Luo, Yongfeng Zhang *BattleAgent: The Bitter Lesson We Learn from Historical Battles to Avoid Future Wars*

[2] (submitted for ECCV) Lizhou Fan*, **Wenyue Hua***, Xiang Li, Kaijie Zhu, Mingyu Jin, Lingyao Li, Haoyang Ling, Jinkui Chi, Jindong Wang, Xin Ma, Yongfeng Zhang *NPHardEval4V: A Dynamic Reasoning Benchmark of Multimodal Large Language Models*

[3] (submitted for ICML) **Wenyue Hua**, Xianjun Yang, Wei Cheng, Yongfeng Zhang *TrustAgent: Towards Safe and Trustworthy LLM-based Agents through Agent Constitution*

[4] (submitted for ACL) Lizhou Fan*, **Wenyue Hua***, Lingyao Li, Haoyang Ling, Yongfeng Zhang *NPHardEval: Benchmarking Reasoning Ability of Large Language Models via Complexity Classes*

[5] (submitted for ACL) **Wenyue Hua***, Jiang Guo*, Mingwen Dong, Henghui Zhu, Patrick Ng, Zhiguo Wang. *Propagation and Pitfalls: Exploring the Challenges of Knowledge Editing through Counterfactual Tasks.*

[6] (submitted for ICML) **Wenyue Hua***, Lizhou Fan*, Lingyao Li, Kai Mei, Jianchao Ji, Yingqiang Ge, Libby Hemphill, Yongfeng Zhang. *War and Peace (WarAgent): Large Language Model-based Multi-Agent Simulation of World Wars.*

[7] Yingqiang Ge, **Wenyue Hua**, Jianchao Ji, Juntao Tan, Shuyuan Xu, Yongfeng Zhang. *OpenAGI: When LLM Meets Domain Experts.*. 37th Conference on Neural Information Processing Systems.

[8] **Wenyue Hua**, Shuyuan Xu, Yingqiang Ge, Yongfeng Zhang. *How to Index Item IDs for Recommendation Foundation Models.* 1st International ACM SIGIR Conference on Information Retrieval in the Asia Pacific.

[9] **Wenyue Hua**, Yingqiang Ge, Shuyuan Xu, Jianchao Ji, Zelong Li, Yongfeng Zhang. *Towards Fairness-aware Large Foundation Models for Recommendation based on Counterfactually-fair Prompting.* 18th Conference of the European Chapter of the Association for Computational Linguistics (EACL)

[10] **Wenyue Hua**, Lifeng Jin, Linfeng Song, Haitao Mi, Yongfeng Zhang, Dong Yu. *Discover, Explanation, Improvement: Automatic Slice Detection Framework for Natural Language Processing.* Transactions of the Association for Computational Linguistics (2023) 11: 1537–1552.

[11] Wenzheng Zhang, **Wenyue Hua**, Karl Stratos. *EntQA: Entity Linking as Question Answering.* International Conference of Learning Representations 2022. Spotlight presentation.

[12] **Wenyue Hua**, Adam Jardine. *Learning Input Strictly Local Functions From Their Composition.* Proceedings of Machine Learning Research. (highest scored submission)

[13] Mingming Sun, **Wenyue Hua**, Ying Liu, Xin Wang, Kangjie Zhen, Ping Li. *A Predicate-Function-Argument Annotation of Natual Language for Open-Domain Information Expression.* 2021 Empirical Methods of Natural Language Processing.

INDUSTRY EXPERIENCES

Knowledge Propagation in Large Language Model based on Model Editing
Applied Scientist, AWS AI Lab, Quicksight-Q, Amazon 05/2023 — 08/2023

- Design a knowledge editing benchmark containing seven different types of discrete reasoning to study whether a model can reason based on newly learned knowledge
- Evaluate and compare different model editing methods on the benchmark, including input-augmentation, QLoRA tuning, MEMIT, and MEND.
- study the effects of (1) model sizes (2) reasoning types (3) editing methods

Automatic Error Detection model in Classification tasks of Natural Language Processing
Research Scientist, AI Lab, Tencent America 05/2022 — 08/2022

- Design evaluation metric: rejection experiment, synthetic data recovery test, active learning
- Design a comprehensive list of features and statistic significance tests to explain error discovered by the model
- Develop neural network based Automatic Error Detection models and develop the model from a simple binary classification task to multi-label classification task and sequence to sequence task

Symbol Aided Open Knowledge Expression: Representation for Open Information Extraction
Research Developer, Cognitive Computing Lab, Big Data Lab in Baidu Research 06/2019 — 09/2019

- Designed a predicate-function-argument semantic representation for Open Information Extraction.
- Wrote a conversion algorithm which converts natural language annotated with Universal Dependency to the semantic representation by Python.
- Wrote a conversion algorithm which converts this semantic representation back to natural language by Python.

SELECTED AWARDS

- National Science Foundation, SBIR ($50,000) 08/2021
- SGS Travel Grant ($175) 01/2020
- College Honor 06/2018
- Phi Beta Kappa 06/2018
- Department Honor 06/2018
- Dean's Honor List 06/2014 — 09/2018

SELECTED EXTRA-CURRICULAR ACTIVITIES

Graduate Student Liaison to Office of Advanced Research Computing 09/2019 — 09/2020
Rutgers University

- Act as a point of contact for the department graduate student users of Amarel for resources and trainings.
- Add to department's documentation about Amarel as an augmentation of Amarel docs for specific disciplines.

President 06/2017 — 06/2018
Driftwood Seminar, UCLA

- Designed and held three speaker panels with five to six speakers for approximately fifty participants across various social, cultural and economic topics.
- Organized and coordinated the work among academic, marketing and operation teams.

Academic Director 06/2016 — 06/2017
Driftwood Asian-Pacific Seminar, UCLA

- Designed topics and content of each panel and talk.
- Co-founder of the club of Driftwood Asian-Pacific Seminar.

SKILLS

Languages	Chinese (proficient), English (proficient)
Programming Languages	Python, C++, Haskell, MATLAB, R
Computer Skills	Git, LaTeX, Linux, Pytorch, MS Offices