

# Wenyue Hua

Graduate Program: PhD in Computer Science ◊ Email: wenyue.hua@rutgers.edu ◊ Phone: 424-3713678

## EDUCATION

---

**Rutgers University, New Brunswick**

09/2020 —

*Ph.D. in Computer Science*

**Rutgers University, New Brunswick**

09/2018 — 10/2020

*Master in Arts , Linguistics (Ph.D. quit)*

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] **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*.
- [2] (Under Progress) **Wenyue Hua**, Jiang Guo, Marvin Dong, Patrick Ng, Zhiguo Wang. *Reasoning-based benchmark on model editing methods*.
- [3] (Accepted by NeurIPS) Yingqiang Ge, **Wenyue Hua**, Jianchao Ji, Juntao Tan, Shuyuan Xu, Yongfeng Zhang. *OpenAGI: When LLM Meets Domain Experts*.
- [4] (Accepted to SIGIR-AP) **Wenyue Hua**, Shuyuan Xu, Yingqiang Ge, Yongfeng Zhang. *How to Index Item IDs for Recommendation Foundation Models*
- [5] (Submitted to EACL) **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*
- [6] (Accepted by TACL) **Wenyue Hua**, Lifeng Jin, Linfeng Song, Haitao Mi, Yongfeng Zhang, Dong Yu. *Discover, Explanation, Improvement: Automatic Slice Detection Framework for Natural Language Processing*
- [7] **Wenyue Hua**, Yongfeng Zhang. *System 1 + System 2 = Better World: Neural-Symbolic Chain of Logic Reasoning for Commonsense Knowledge Graph Completion*. Empirical Methods in Natural Language Processing, Findings 2023.
- [8] Wenzheng Zhang, **Wenyue Hua**, Karl Stratos. *EntQA: Entity Linking as Question Answering*. International Conference of Learning Representations 2022. Spotlight presentation.
- [9] **Wenyue Hua**, Adam Jardine. *Learning Input Strictly Local Functions From Their Composition*. Proceedings of Machine Learning Research. (highest scored submission)
- [10] 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.
- [10] **Wenyue Hua**, Adam Jardine. *Learning Underlying Representations and Phonological Grammars*. West Coast Conference of Formal Linguistics 2020.

## 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

### **Natural Language Processing**

*NLP Research Scientist, Claudius Legal Intelligence*

08/2020 —

- Pre-train domain specific ELECTRA model with Reformer generator and discriminator, assess performance on new Named Entity Recognition datasets, designed and created legal NER dataset on personal injury cases and achieved SOTA result using the pretrained model.
- Use the combination of rule-based and neural-network to classify texts of injury to corresponding (multiple) categories and obtain over 90% accuracy.
- Advise two interns on multi-label classifier, Named Entity Recognition models

### **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 (\$256,000)	08/2021
•SGS Travel Grant (\$175)	01/2020
•Excellent Fellowship (\$25,000 for 5 years)	09/2018
•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

---

<b>Languages</b>	Chinese (proficient), English (proficient)
<b>Programming Languages</b>	Python, C++, Haskell, MATLAB, R
<b>Computer Skills</b>	Git, L <sup>A</sup> T <sub>E</sub> X, Linux, Pytorch, MS Offices