

# YEBOWEN HU

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## RESEARCH INTEREST

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CS PhD candidate of University of Central Florida. My research focuses primarily on evaluating and optimizing **Information Fusion** and **Reasoning** capabilities of LLMs. I am passionate about utilizing my skills and insights to advance understandings of principles and applications of LLMs.

## EDUCATION

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**Doctor of Philosophy**, University of Central Florida Expected May 2025  
Major in Computer Science Orlando, FL  
Advisors: [Fei Liu](#) and [Hassan Foroosh](#)

**Master of Science**, University of Florida 2016 - 2018  
Major in Electrical and Computer Engineering Gainesville, FL  
(minor degree: Computer Science)

**Bachelor of Science**, Central South University 2012 - 2016  
Major in Electrical and Electronic Automation Engineering ChangSha, China

## PUBLICATIONS

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**When Reasoning Meets Information Aggregation: A Case Study with Sports Narratives**  
**Yebowen Hu**, Kaiqiang Song, Sangwoo Cho, Xiaoyang Wang, Wenlin Yao, Hassan Foroosh, Dong Yu, Fei Liu  
*In submission to EMNLP 2024.*

**BadRAG: Identifying Vulnerabilities in Retrieval Augmented Generation of Large Language Models**  
Jiaqi Xue, Mengxin Zheng, **Yebowen Hu**, Fei Liu, Xun Chen, Qian Lou  
*In submission to NeurIPS 2024.*

**SportsMetrics: Blending Text and Numerical Data to Understand Information Fusion in LLMs**  
**Yebowen Hu**, Kaiqiang Song, Sangwoo Cho, Xiaoyang Wang, Hassan Foroosh, Dong Yu, Fei Liu  
*Main conference of Association for Computational Linguistics (ACL'24)*, Bangkok, Thailand, Aug 2024.

**InFoBench: Evaluating instruction following ability in large language models**  
Yiwei Qin, Kaiqiang Song, **Yebowen Hu**, Wenlin Yao, Sangwoo Cho, Xiaoyang Wang, Xuansheng Wu, Fei Liu, Pengfei Liu, Dong Yu  
*Findings of Association for Computational Linguistics (ACL'24)*, Bangkok, Thailand, Aug 2024.

**Can Large Language Models do Analytical Reasoning?**  
**Yebowen Hu**, Kaiqiang Song, Sangwoo Cho, Xiaoyang Wang, Hassan Foroosh, Dong Yu, Fei Liu  
*preprint on arXiv*, Feb 2024.

**DecipherPref: Analyzing Influential Factors in Human Preference Judgments via GPT-4**  
**Yebowen Hu**, Kaiqiang Song, Sangwoo Cho, Xiaoyang Wang, Hassan Foroosh, Fei Liu  
*Main conference of Empirical Methods in Natural Language Processing (EMNLP'23)*, Singapore, Dec 2023.

**MeetingBank: A New Benchmark Dataset for Meeting Summarization**  
**Yebowen Hu**, Tim Ganter, Hanieh Deilamsalehy, Franck Dernoncourt, Hassan Foroosh, Fei Liu  
*Main conference of Association for Computational Linguistics (ACL'23)*, Toronto, Canada, Aug 2023.

## PROFESSIONAL EXPERIENCE

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### Graduate Research Assistant

University of Central Florida, CECS department

Orlando, FL  
August 2021 - Present

- Led researches on LLMs' reasoning, information fusion, preferences, and safety.
- **Information Fusion & Reasoning:** Evaluated LLMs' capability under heterogeneous resource scenario in real-world domains: Sports and Finance
- **Preference:** Investigated explicit preferences aligned with proprietary LLMs and essential factors ranking
- Published papers on top-tier conferences. Released datasets, codes, and demonstration websites: SportsMetrics, InFoBench, DecipherPref and MeetingBank

### Research Scientist Intern

Tencent AI Lab

Bellevue, WA  
May 2024 - Present

- Leading project on exploring LLMs' analogical reasoning on uncertain decision-making problems
- Designing and conducting training experiments to enhance LLMs reasoning ability
- Proposed framework to synthesize knowledge-intensive numerical reasoning task

### Research Scientist Intern

Tencent AI Lab

Bellevue, WA  
May 2023 - Aug 2023

- Led project on probing human preference influential factors on *k-wise* text comparisons with LLM
- Introduced Bradley-Terry-Lucy Model to rank preference factors that characterize LLM output
- Collaborated with researchers to create decomposed-instruction following benchmark

### NLP Algorithm Engineer

Hithink Flush Information Network Co Ltd

Hangzhou, China  
May 2019 - Mar 2021

- Researched and developed application of domain knowledge graph from 10M financial documents to support industrial chain analysis
- Led project to construct market penetration graph to elucidate the underlying relationships among shareholders
- Ranking 4th position in CCKS 2020: Event Arguments Extraction from Doc-level Financial Text

## SERVICE

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- Serve as reviewers in top-rank academic conferences: EMNLP'24, ACL'24, NAACL'24, JAIR'24, ACL'23, EMNLP'23, CoNLL'23, JAIR'22, TACL'22, TACL'21
- Serve as program committee of IEEE International Conference on Healthcare Informatics (IEEE ICHI 2024)

## AWARDS

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ORCGS Doctoral Fellowship, University of Central Florida, 2021

ECE Graduate Academic Achievement Awards Scholarship, University of Florida, 2016

## OTHERS

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**Technical Skills:** Python, PyTorch, Prompt Engineering, Deep Learning Algorithm, Natural Language Processing

**Language:** English (Fluent), Mandarin (Native)

**Personality:** AI Enthusiast, Team-oriented worker, Articulate Communicator