Junting Wang

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EDUCATION

University of Illinois at Urbana-Champaign

- Ph.D. in Computer Science — Aug 2022 - Present
  Advisor: Hari Sundaram
- MS in Computer Science — Aug 2020 - May 2022
  Advisor: Hari Sundaram
- BS in Computer Science and Applied Mathematics — Aug 2016 - May 2020

SELECTED PUBLICATIONS

[1] **Junting Wang**, Chenghuan Guo, Jiao Yang, Hanhui Guo, Yan Gao, Hari Sundaram. *Multi-Modal Relational Item Representation Learning for Inferring Substitutable and Complementary Item.* [Under Review]. [Paper].

[2] **Junting Wang**, Yetian Chen, Chenghuan Guo, Yan Gao, Hari Sundaram. *Invariant Item Representation Learning for Sequential Cold-Start Recommendation.* [Under Review].

[3] Yunzhe Li, **Junting Wang**, Hari Sundaram. *LLM-RecG: LLM-Driven Cross-Domain Sequential Recommendation: A Framework for Zero-Shot Generalization.* In the 19th ACM Recommender Systems Conference (**RecSys**), 2025. [Paper].

[4] **Junting Wang***, Praneet Rathi*, Hari Sundaram. *A Pre-Trained Zero-Shot Sequential Recommendation Framework via Popularity Dynamics.* In the 18th ACM Recommender Systems Conference (**RecSys**), 2024. [Paper].

[5] **Junting Wang***, Aravind Sankar*, Adit Krishnan, Hari Sundaram. *Self-Supervised Attributed Structural Role Learning in Graph Neural Networks.* In Knowledge and Information Systems (**KAIS**), 2022. [Paper].

[6] **Junting Wang***, Aravind Sankar*, Adit Krishnan, Hari Sundaram. *ProtoCF: Prototypical Collaborative Filtering for Few-Shot Item Recommendation.* In the 15th ACM Recommender Systems Conference (**RecSys**), 2021. [Paper].

[7] Kanika Narang, Adit Krishnan, **Junting Wang**, Chaoqi Yang, Hari Sundaram, Carolyn Sutter. *Ranking User-Generated Content via Multi-Relational Graph Convolution.* In the 44th International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR**), 2021. [Paper].

[8] **Junting Wang***, Aravind Sankar*, Adit Krishnan, Hari Sundaram. *Beyond Localized Graph Neural Networks: An Attributed Motif Regularization Framework.* In the 20th IEEE International Conference on Data Mining (**ICDM**), 2020. [Paper].

(*indicates equal contribution)

EXPERIENCE

- **University of Illinois at Urbana-Champaign** — Urbana, IL
  Research Assistant — Aug 2020 - Present
  - Conducted research on recommender systems and graph neural networks, with a focus on trustworthiness (e.g., generalizability) and addressing sparsity issues, such as long-tail item representation learning.
  - Investigating LLM-enhanced recommenders and causal representation learning, including counterfactual frameworks to improve long-tail item performance and causal methods to mitigate hallucinations in large language models.
- **Amazon - Retail - International Machine Learning** — Seattle, WA
  Applied Scientist Intern — Summers 2024 & 2025
  - Designed a multi-modal item representation learning framework that integrates item-item relationships and diverse content modalities, achieving up to a **39.2**% improvement over current methods across five real-world datasets, with strong effectiveness in cold-start and sparse data scenarios.
  - Implemented an invariant item representation learning framework to address spurious multi-modal item information in sequential recommendation, demonstrating up to a **10.5**% improvement over existing methods on multiple real-world datasets, particularly excelling in cold-start scenarios.
- **Amazon - Alexa AI - Entity Resolution** — Cambridge, MA
  Applied Scientist Intern — Summer 2022
  - Created a cross-domain representation learning framework for entity-based personalization that unifies user representation across multiple catalog domains, delivering over a **5**% improvement compared to the existing system, validated on internal and external datasets for recommendation applications.

PROFESSIONAL SERVICES

Reviewer for WSDM 2023, ACL 2023, WWW 2024, WSDM 2024, WSDM 2025, WWW 2025, SIGIR 2025, and KDD 2025.