

Hyunsik Jeon

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RESEARCH INTERESTS

My research focuses on advancing **recommender systems (RecSys)** through the application of cutting-edge AI techniques. My previous and ongoing work can be summarized as follows:

- **Conversational RecSys.** Researched practical conversational recommendation [A1, C10] and am currently developing visually-aware conversational recommender systems using large vision-language models to enhance multimodal personalization.
- **Sequential RecSys.** Developed effective sequential recommender systems [C9, C5, C3, J3] and am currently enhancing Transformer-based models to improve their effectiveness in sequential recommendation tasks.
- **RecSys Beyond Accuracy.** Extended recommender systems beyond mere accuracy by targeting diversity, calibration, robustness, and other practical metrics [C9, C8, C7, C6, C4, C1].

RESEARCH EXPERIENCE

University of California San Diego, CA, USA

Sep. 2023 - Aug. 2025 (expected)

Postdoctoral Researcher, Computer Science & Engineering

Advisor: [Prof. Julian McAuley](#)

Hyperconnect, Seoul, South Korea

Jul. 2020 - Aug. 2020

Research Intern, Machine Learning Team

EDUCATION

Seoul National University, Seoul, South Korea

Aug. 2023

Ph.D., Computer Science & Engineering

Thesis: “Modeling Bundle Recommendation with Personalized Pattern Analysis”

Distinguished Ph.D. Dissertation Award

Advisor: [Prof. U Kang](#)

Seoul National University, Seoul, South Korea

Feb. 2019

M.Sc., Computer Science & Engineering

Thesis: “Context Adaptation for Accurate Recommendation with Collective Matrix Factorization”

Advisor: [Prof. U Kang](#)

Hanyang University, Seoul, South Korea

Feb. 2017

B.Sc., Computer Science & Engineering

AWARDS AND HONORS

Distinguished Ph.D. Dissertation Award

Aug. 2023

Dept. of CSE at Seoul National University

Sejong Science Fellowship Grants (Overseas Training Track)

May. 2023

Funding for 2 years of Postdoctoral Research, National Research Foundation of Korea

Topic: “Accurate, Robust, and Interactive Recommender Systems for Enhancing User Experience”

SIGIR Student Travel Grants

Aug. 2022

ACM International Conference on Information and Knowledge Management (CIKM), 2022, Atlanta, USA

MIND News Recommendation Competition Award

Sep. 2020

Microsoft Research

Second Prize Award (215 teams participated)

Best Student Paper Award

May. 2020

Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), 2020, Singapore

HumanTech Paper Award
Samsung Electronics
Honorable Mention - 4th in CSE

Feb. 2020

BigData Student Travel Grants
IEEE International Conference on Big Data (BigData), 2019, Los Angeles, USA

Dec. 2019

PUBLICATIONS

Preprints

- A1. Imagery as Inquiry: Exploring A Multimodal Dataset for Conversational Recommendation
Se-eun Yoon, Hyunsik Jeon, and Julian McAuley
[arXiv:2405.14142](#)

Refereed conferences (* denotes equal contribution)

- C10. Neighborhood-Based Collaborative Filtering for Conversational Recommendation
Zhouhang Xie*, Junda Wu*, Hyunsik Jeon*, Zhankui He, Harald Steck, Rahul Jha, Dawen Liang, Nathan Kallus, and Julian Mcauley
ACM Conference on Recommender Systems (**RecSys**) - Short Paper, 2024, Bari, Italy
- C9. Calibration-Disentangled Learning and Relevance-Prioritized Reranking for Calibrated Sequential Recommendation
Hyunsik Jeon, Se-eun Yoon, and Julian McAuley
ACM International Conference on Information and Knowledge Management (**CIKM**), 2024, Boise, USA
Oral Presentation - Acceptance Rate: $347/1496 \approx 23.2\%$
- C8. Cold-start Bundle Recommendation via Popularity-based Coalescence and Curriculum Heating
Hyunsik Jeon, Jong-eun Lee, Jeongin Yun, and U Kang
ACM The Web Conference (**WWW**), 2024, Singapore
Oral Presentation: $189/2008 \approx 9.4\%$ - Acceptance Rate: $405/2008 \approx 20.2\%$
- C7. Aggregately Diversified Bundle Recommendation via Popularity Debiasing and Configuration-aware Reranking
Hyunsik Jeon, Jongjin Kim, Jaeri Lee, Jong-eun Lee, and U Kang
Pacific-Asia Conference on Knowledge Discovery and Data Mining (**PAKDD**), 2023, Osaka, Japan
Oral Presentation - Acceptance Rate: $143/822 \approx 17.4\%$
- C6. Diversely Regularized Matrix Factorization for Accurate and Aggregately Diversified Recommendation
Jongjin Kim, Hyunsik Jeon, Jaeri Lee, and U Kang
Pacific-Asia Conference on Knowledge Discovery and Data Mining (**PAKDD**), 2023, Osaka, Japan
Oral Presentation - Acceptance Rate: $143/822 \approx 17.4\%$
- C5. Accurate Action Recommendation for Smart Home via Two-Level Encoders and Commonsense Knowledge
Hyunsik Jeon, Jongjin Kim, Hoyoung Yoon, Jaeri Lee, and U Kang
ACM International Conference on Information and Knowledge Management (**CIKM**), 2022, Atlanta, USA
Oral Presentation - Acceptance Rate: $274/1175 \approx 23.2\%$
- C4. Accurate Node Feature Estimation with Structured Variational Graph Autoencoder
Jaemin Yoo, Hyunsik Jeon, Jinhong Jung, and U Kang
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD**), 2022, Washington DC, USA
Oral Presentation - Acceptance Rate: $254/1695 \approx 15.0\%$
- C3. Accurate News Recommendation Coalescing Personal and Global Temporal Preferences
Bonhun Koo, Hyunsik Jeon, and U Kang
Pacific-Asia Conference on Knowledge Discovery and Data Mining (**PAKDD**), 2020, Singapore
Oral Presentation - Acceptance Rate: $135/628 \approx 21.5\%$
Best Student Paper Award
- C2. Data Context Adaptation for Accurate Recommendation with Additional Information
Hyunsik Jeon, Bonhun Koo, and U Kang
IEEE International Conference on Big Data (**BigData**), 2019, Los Angeles, USA

Oral Presentation - Acceptance Rate: 106/550 \approx 19.3%

Samsung HumanTech Paper Award

- C1. Belief Propagation Network for Hard Inductive Semi-supervised Learning
Jaemin Yoo, Hyunsik Jeon, and U Kang
International Joint Conference on Artificial Intelligence (**IJCAI**), 2019, Macao, China
Oral Presentation - Acceptance Rate: 850/4752 \approx 17.9%

Refereed journals

- J4. Accurate Bundle Matching and Generation via Multitask Learning with Partially Shared Parameters
Hyunsik Jeon, Jun-Gi Jang, Taehun Kim, and U Kang
PLOS ONE, 2023
- J3. PGT: News Recommendation Coalescing Personal and Global Temporal Preferences
Bonhun Koo, Hyunsik Jeon, and U Kang
Knowledge and Information Systems (**KAIS**), 2021
- J2. Multi-EPL: Accurate Multi-Source Domain Adaptation
Seongmin Lee, Hyunsik Jeon, and U Kang
PLOS ONE, 2021
- J1. Unsupervised Multi-Source Domain Adaptation with No Observable Source Data
Hyunsik Jeon, Seongmin Lee, and U Kang
PLOS ONE, 2021

Others

- O1. UniWalk: Explainable and Accurate Recommendation for Rating and Network Data
Haekyu Park, Hyunsik Jeon, Junghwan Kim, Beunguk Ahn, and U Kang
arXiv:1710.07134, 2017

PATENTS

Korea

- P6. Apparatus and Method for Recommending Bundled Items
Hyunsik Jeon, Jongjin Kim, Jaeri Lee, Jong-eun Lee, and U Kang (filed on Nov. 2022)
- P5. Method and Apparatus for Recommending Items Based on Diversely Regularized Matrix Factorization
Jongjin Kim, Hyunsik Jeon, Jaeri Lee, and U Kang (filed on Nov. 2022)
- P4. Electronic Device and Computer Readable Storage Medium for Control Recommendation
Hyunsik Jeon, Jongjin Kim, Hoyoung Yoon, Jaeri Lee, Hyunju Seo, Sanghee Kim, Inchul Hwang, and U Kang (filed on Aug. 2022)
- P3. Apparatus and Method for Predicting Feature of Node
Jaemin Yoo, Hyunsik Jeon, Jinhong Jung, and U Kang (filed on Dec. 2021)
- P2. Apparatus and Method for Unsupervised Domain Adaptation
Hyunsik Jeon, Seongmin Lee, and U Kang (filed on Oct. 2021)
- P1. Explainable and Accurate Recommender Method and System Using Social Network Information and Rating Information
Haekyu Park, Hyunsik Jeon, and Junghwan Kim, and U Kang (filed on Nov. 2017)

PROFESSIONAL SERVICES

Session Chair

ACM International Conference on Information Management (CIKM) 2024

Program Committee & Reviewer

IEEE International Conference on Big Data and Smart Computing (BigComp) 2020 - 2023

ACM International Conference on Information Management (CIKM) 2018 - 2019

IEEE International Conference on Data Mining (ICDM) 2019

International Conference on Learning Representations (ICLR) 2021

ACM SIGKDD Conference of Knowledge Discovery and Data Mining (KDD)	<i>2019 - 2025</i>
Neural Information Processing Systems (NeurIPS)	<i>2021 - 2023</i>
SIAM International Conference on Data Mining (SDM)	<i>2024</i>
The Web Conference (formerly WWW)	<i>2019 - 2021, 2024 - 2025</i>
ACM International Conference on Web Search and Data Mining (WSDM)	<i>2019</i>
Frontiers in Big Data	<i>2023 - 2024</i>

PhD Symposium Mentorship

ACM International Conference on Information Management (CIKM)	<i>2024</i>
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INVITED TALKS

Korea Software Congress (KSC) 2022, KIISE	<i>Dec. 21, 2022</i>
Korea Software Congress (KSC) 2019, KIISE	<i>Dec. 19, 2019</i>
Data Mining Lab, Korea Advanced Institute of Science & Technology (KAIST) AI	<i>Jul. 4, 2023</i>

REFERENCES

Prof. Julian McAuley (Postdoc advisor) - University of California, San Diego	jmcauley@ucsd.edu
Prof. U Kang (PhD advisor) - Seoul National University	ukang@snu.ac.kr