

# Hyunsik Jeon

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## RESEARCH INTERESTS

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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

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**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

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**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

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**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

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### 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. 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:  $347/1496 \approx 23.2\%$
- C9. 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
- 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

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### 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

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### 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 - 2025</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**

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Data Intelligence and Learning Lab, Sungkyunkwan University (SKKU)	<i>Nov. 27, 2024</i>
Data Mining Lab, Korea Advanced Institute of Science & Technology (KAIST) AI	<i>Jul. 4, 2023</i>
Korea Software Congress (KSC) 2022, KIISE	<i>Dec. 21, 2022</i>
Korea Software Congress (KSC) 2019, KIISE	<i>Dec. 19, 2019</i>

## **REFERENCES**

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<a href="#">Prof. Julian McAuley</a> (Postdoc advisor) - University of California, San Diego	<a href="mailto:jmcauley@ucsd.edu">jmcauley@ucsd.edu</a>
<a href="#">Prof. U Kang</a> (PhD advisor) - Seoul National University	<a href="mailto:ukang@snu.ac.kr">ukang@snu.ac.kr</a>