

# Hyunsik Jeon

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## RESEARCH INTERESTS

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My research aims to enhance **recommender systems** by employing cutting-edge AI techniques, prioritizing critical challenges beyond accuracy, such as diversity, calibration, and fairness.

Currently, I am developing fair and effective **conversational recommender systems (CRS)** using **Large Language Models (LLMs)**, aiming to deliver equitable and precise recommendations across diverse user groups.

## RESEARCH EXPERIENCE

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**University of California San Diego**, CA, USA *Sep. 2023 - Present*  
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** *Feb. 2020*  
Samsung Electronics  
Honorable Mention - 4th in CSE

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

## 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

- 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

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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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### Program Committee

IEEE International Conference on Big Data and Smart Computing (BigComp)	2021 - 2023
SIAM International Conference on Data Mining (SDM)	2024

### Reviewer

IEEE International Conference on Big Data and Smart Computing (BigComp)	2020
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)	2019 - 2025
Neural Information Processing Systems (NeurIPS)	2021 - 2023
The Web Conference (formerly WWW)	2019 - 2021, 2024
ACM International Conference on Web Search and Data Mining (WSDM)	2019
Frontiers in Big Data	2023 - 2024

## INVITED TALKS

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### Conference

Korea Software Congress (KSC) 2022, KIISE

*Dec. 21, 2022*

Korea Software Congress (KSC) 2019, KIISE

*Dec. 19, 2019*

### Others

Data Mining Lab, Korea Advanced Institute of Science & Technology (KAIST) AI

*Jul. 4, 2023*

## TEACHING EXPERIENCE

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### Seoul National University

T.A., Undergraduate Research Opportunities Program (UROP) @ SNU

*2017, 2020, 2022*

T.A., M2177.004900: Theory and Lab of IoT, AI, and Big Data @ SNU

*Spring 2019*

T.A., 4190.773: Optimization for Machine Learning (Topics in Artificial Intelligence) @ SNU

*Spring 2018*

T.A., M1522.000900: Data Structure @ SNU

*Fall 2017*

### Other Organizations

T.A., Advanced DS @ LG

*2023*

T.A., AI Master @ Hyundai Motors

*2022*

T.A., AI Lectures @ KDB

*2022 - 2023*

T.A., SK-Univ @ SK

*2020*

T.A., DS Advanced Projects @ LG

*2020*

T.A., DxP (1st) @ Hana Financial Group

*2019*

T.A., AI Action Learning @ Samsung Electronics

*2019*

T.A., NPEX (1st - 2nd) @ Samsung Electronics

*2019 - 2020*

T.A., DS<sup>2</sup> (3rd - 9th) @ Samsung Electronics

*2019 - 2022*

## REFERENCES

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[Prof. Julian McAuley](#) (Postdoc advisor) - University of California, San Diego

[jmcauley@ucsd.edu](mailto:jmcauley@ucsd.edu)

[Prof. U Kang](#) (PhD advisor) - Seoul National University

[ukang@snu.ac.kr](mailto:ukang@snu.ac.kr)