

# 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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### Refereed conferences

- 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)	<i>2021 - 2023</i>
SIAM International Conference on Data Mining (SDM)	<i>2024</i>

### Reviewer

IEEE International Conference on Big Data and Smart Computing (BigComp)	<i>2020</i>
ACM International Conference on Information Management (CIKM)	<i>2018 - 2019</i>
IEEE International Conference on Data Mining (ICDM)	<i>2019</i>
International Conference on Learning Representations (ICLR)	<i>2021</i>
ACM SIGKDD Conference of Knowledge Discovery and Data Mining (KDD)	<i>2019 - 2024</i>
Neural Information Processing Systems (NeurIPS)	<i>2021 - 2023</i>
The Web Conference (formerly WWW)	<i>2019 - 2021, 2024</i>
ACM International Conference on Web Search and Data Mining (WSDM)	<i>2019</i>
Frontiers in Big Data	<i>2023 - 2024</i>

## INVITED TALKS

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### Academia

Data Mining Lab, Korea Advanced Institute of Science & Technology (KAIST) AI	<i>Jul. 4, 2023</i>
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### Conference

Korea Software Congress (KSC) 2022, KIISE	<i>Dec. 21, 2022</i>
Korea Software Congress (KSC) 2019, KIISE	<i>Dec. 19, 2019</i>

## TEACHING EXPERIENCE

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### Seoul National University

T.A., Undergraduate Research Opportunities Program (UROP) @ SNU	<i>2017, 2020, 2022</i>
T.A., M2177.004900: Theory and Lab of IoT, AI, and Big Data @ SNU	<i>Spring 2019</i>
T.A., 4190.773: Optimization for Machine Learning (Topics in Artificial Intelligence) @ SNU	<i>Spring 2018</i>
T.A., M1522.000900: Data Structure @ SNU	<i>Fall 2017</i>

### 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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<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>