

# Hyunsik Jeon

Postdoctoral Researcher ◊ CSE, UC San Diego

Room 4202 ◊ CSE Department

Email: [hyjeon@ucsd.edu](mailto:hyjeon@ucsd.edu) ◊ Homepage: <https://jeon185.github.io>

## 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

- 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:  $347/14963 \approx 23.2\%$
- 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. <a href="#">Julian McAuley</a> (Postdoc advisor) - University of California, San Diego	<a href="mailto:jmcauley@ucsd.edu">jmcauley@ucsd.edu</a>
Prof. <a href="#">U Kang</a> (PhD advisor) - Seoul National University	<a href="mailto:ukang@snu.ac.kr">ukang@snu.ac.kr</a>