

# Hyunsik Jeon

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Room 4202 ◇ CSE Department

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## POSITION

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**University of California San Diego**, CA, USA

*Sep. 2023 - Present*

Postdoctoral Researcher, Computer Science & Engineering

Advisor: [Prof. Julian McAuley](#)

## 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

## RESEARCH EXPERIENCE

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**Hyperconnect**, Seoul, South Korea

*Jul. 2020 - Aug. 2020*

Research Intern, Machine Learning Team

## RESEARCH INTERESTS

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### Recommender Systems

Recommendation for bundle (PLOS ONE'23), news (PAKDD'20, KAIS'21), and action (CIKM'22)

Diversified recommendation (PAKDD'23, PAKDD'23) and explainable recommendation (Arxiv'17)

Utilizing additional information (BigData'19)

### Graph Learning

Semi-supervised learning (IJCAI'19) and node-feature estimation (KDD'22)

### Transfer Learning

Multi-source domain adaptation (PLOS ONE'21, PLOS ONE'21)

## 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**

- 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:  $143/822 = 17.4\%$
- 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:  $143/822 = 17.4\%$
- 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:  $274/1175 = 23.2\%$
- 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:  $254/1695 = 15.0\%$
- 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:  $135/628 = 21.5\%$   
**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:  $106/550 = 19.3\%$   
**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:  $850/4752 = 17.9\%$

**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

## Preprints

- A1. 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  
 U Kang, Hyunsik Jeon, Jongjin Kim, Jaeri Lee, and Jong-eun Lee (filed on Nov. 2022)
- P5. Method and Apparatus for Recommending Items Based on Diversely Regularized Matrix Factorization  
 U Kang, Jongjin Kim, Hyunsik Jeon, and Jaeri Lee (filed on Nov. 2022)
- P4. Electronic Device and Computer Readable Storage Medium for Control Recommendation  
 U Kang, Hyunsik Jeon, Jongjin Kim, Hoyoung Yoon, Jaeri Lee, Hyunju Seo, Sanghee Kim, and Inchul Hwang (filed on Aug. 2022)
- P3. Apparatus and Method for Predicting Feature of Node  
 U Kang, Jaemin Yoo, Hyunsik Jeon, Jinhong Jung (filed on Dec. 2021)
- P2. Apparatus and Method for Unsupervised Domain Adaptation  
 U Kang, Hyunsik Jeon, and Seongmin Lee (filed on Oct. 2021)
- P1. Explainable and Accurate Recommender Method and System Using Social Network Information and Rating Information  
 U Kang, Haekyu Park, Hyunsik Jeon, and Junghwan Kim (filed on Nov. 2017)

## PROFESSIONAL SERVICES

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### Program Committee

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

### Reviewer

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|---|-------------|
| 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 - 2023 |
| Neural Information Processing Systems (NeurIPS)                         | 2021 - 2022 |
| The Web Conference (formerly WWW)                                       | 2019 - 2021 |
| ACM International Conference on Web Search and Data Mining (WSDM)       | 2019        |
| Frontiers in Big Data   | 2023        |

## INVITED TALKS

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### Invited Conference Speaker

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|---|---------------|
| Korea Software Congress (KSC) 2022, KIISE | Dec. 21, 2022 |
| Korea Software Congress (KSC) 2019, KIISE | Dec. 19, 2019 |

## TEACHING EXPERIENCE

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### Seoul National University

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|---|------------------|
| 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

## PROJECTS

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Elancer, Job Matching	2023
Samsung C-Lab, Plan Recommender Systems	2023
JungHun Foundation, Recommender Systems Under Constraints	2022
Samsung, Effective Expression and Compression of Knowledge-Base for IoT Devices	2022
Posco-ICT, Recommender Systems for Learning Platform	2022
JungHun Foundation, Recommender Systems Under Constraints	2021
Samsung, Data Driven Analysis and Reasoning for Device Control	2021
LINA, Prediction and Control of Insurance Cancellation	2020
Wemakeprice, Recommender Systems Based on Deep Learning	2019
LG, Failure Detection for Compressor in Refrigerator	2018
LG, Optimization of Sputtering for Uniform Film Formation	2018
SKT, Feature Selection for RNN-based Recommender Systems	2018
SKT, Recommender Systems for Oksusu Videos	2017

## GRADUATE COURSEWORK

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4190.676: Artificial Neural Networks @ SNU	Fall 2019
M2177.003000: Advanced Data Mining @ SNU	Fall 2019
M1522.001600: Reinforcement Learning (Topics in Big Data Analytics) @ SNU	Spring 2019
4190.681A: Genetic Algorithm @ SNU	Spring 2019
4190.771: ML Algorithms in Bioinformatics (Topics in Algorithms) @ SNU	Spring 2018
430.711A: Introduction to Computer Vision @ SNU	Spring 2018
M1522.000500: Information Visualization and Visual Analytics @ SNU	Fall 2017
M1522.001600: Advanced Deep Learning (Topics in Big Data Analytics) @ SNU	Fall 2017
4190.564: Advanced Database @ SNU	Spring 2017
M1522.001600: Deep Learning (Topics in Big Data Analytics) @ SNU	Spring 2017