

# Hyunsik Jeon

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## POSITIONS

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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”  
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 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

IEEE International Conference on Big Data and Smart Computing (BigComp) *2021 - 2023*

### 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 - 2023*

Neural Information Processing Systems (NeurIPS) *2021 - 2022*

The Web Conference (formerly known as 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

Korea Software Congress (KSC) 2022, KIISE *Dec. 21, 2022*

**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*

**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	<i>Spring 2018</i>
430.711A: Introduction to Computer Vision @ SNU	<i>Spring 2018</i>
M1522.000500: Information Visualization and Visual Analytics @ SNU	<i>Fall 2017</i>
M1522.001600: Advanced Deep Learning (Topics in Big Data Analytics) @ SNU	<i>Fall 2017</i>
4190.564: Advanced Database @ SNU	<i>Spring 2017</i>
M1522.001600: Deep Learning (Topics in Big Data Analytics) @ SNU	<i>Spring 2017</i>