Hyunsik Jeon

Data Mining Laboratory ⋄ Seoul National University

Building 301, Room 515 ⋄ 1, Gwanak-ro, Gwnak-gu, Seoul

Email: jeon185@snu.ac.kr ⋄ Homepage: https://jeon185.github.io

EDUCATION

Seoul National University, Seoul, Korea *Mar. 2019 - Present*
Ph.D., Computer Science and Engineering
Advisor: Prof. U Kang

Seoul National University, Seoul, Korea *Feb. 2019*
M.Sc., Computer Science and Engineering
Thesis: "Context Adaptation for Accurate Recommendation with Collective Matrix Factorization"
Advisor: Prof. U Kang

Hanyang University, Seoul, Korea *Feb. 2017*
B.Sc., Computer Science and Engineering

RESEARCH INTERESTS

Recommender Systems

Recommendation for product bundle, e-commerce, news, and IoT

Diversified recommendation

Explainable recommendation

Transfer Learning

Multi-source domain adaptation

Graph Learning

Semi-supervised learning and node-feature estimation

AWARDS AND HONORS

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

WORK EXPERIENCE

Research Intern

Hyperconnect, Seoul, Republic of Korea *July 2020 - Aug. 2020*

PUBLICATIONS

Conferences

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: $850/4752 = 17.9\%$

Journals

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

A3. Accurate Bundle Matching and Generation via Multitask Learning with Partially Shared Parameters
Hyunsik Jeon, Jun-Gi Jang, Taehun Kim, and U Kang
arXiv:2210.15460, 2022

A2. Diversely Regularized Matrix Factorization for Accurate and Aggregately Diversified Recommendation
Jongjin Kim, Hyunsik Jeon, Jaeri Lee, and U Kang
arXiv:2211.01328, 2022

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

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 Medimum 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

Program Committee

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

External 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 - 2022*
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*

INVITED TALKS

Invited Conference Speaker

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

TEACHING EXPERIENCE

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.**, AI Master @ Hyundai Motors	*2022*
• **T.A.**, AI Lectures @ KDB	*2022*
• **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^2 (3rd - 9th) @ Samsung Electronics   *2019 - 2022*

PROJECTS

JungHun Foundation, Recommender Systems Under Constraints   *2022*

Samsung, Effective Knowledge-Base Expression and Compression 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

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*