Junseok Lee

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RESEARCH INTEREST

I am interested in conducting research on general machine learning methodologies (e.g., self-supervised learning) and applying them to real-world problems, with a particular focus on Bioinformatics (e.g., single-cell RNA analysis).

- Graph Representation Learning
- Bioinformatics

EDUCATION

KAIST (Korea Advanced Institute of Science and Technology)

- Ph.D. in Industrial and Systems Engineering — Mar 2023 – Present
  - Research Interest: Graph Representation Learning, Bioinformatics
  - Advisor: Prof. Chanyoung Park

KAIST (Korea Advanced Institute of Science and Technology)

- M.S. in Industrial and Systems Engineering — Mar 2021 – Feb 2023
  - Research Interest: Graph Representation Learning
  - Advisor: Prof. Chanyoung Park

Pusan University

- B.S. in Industrial Engineering — Mar 2015 – Feb 2021
  - GPA: 4.15/4.5

PUBLICATIONS
(†: Equal contribution)

CONFERENCES

[C6] Task-Equivariant Graph Few-shot Learning
Sungwon Kim, **Junseok Lee**, Namkyeong Lee, Wonjoong Kim, Seungyoon Choi, Chanyoung Park
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD 2023**)

[C5] Conditional Graph Information Bottleneck for Molecular Relational Learning
Namkyeong Lee, Dongmin Hyun, Gyoung S. Na, Sungwon Kim, **Junseok Lee**, Chanyoung Park
International Conference on Machine Learning (**ICML 2023**)

[C4] Heterogeneous Graph Learning for Multi-modal Medical Data Analysis
Sein Kim, Namkyeong Lee, **Junseok Lee**, Dongmin Hyun, Chanyoung Park
AAAI Conference on Artificial Intelligence (**AAAI 2023 Oral Presentation**)

[C3] Relational Self-Supervised Learning on Graphs
Namkyeong Lee, Dongmin Hyun, **Junseok Lee**, Chanyoung Park
ACM International Conference on Information and Knowledge Management (**CIKM 2022**)

[C2] GraFN: Semi-Supervised Node Classification on Graph with Few Labels via Non-Parametric Distribution Assignment
Junseok Lee, Yunhak Oh, Yeonjun In, Namkyeong Lee, Dongmin Hyun, Chanyoung Park
ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR 2022 Short Paper**)

[C1] Augmentation-Free Self-Supervised Learning on Graphs
Namkyeong Lee, **Junseok Lee**, Chanyoung Park
AAAI Conference on Artificial Intelligence (**AAAI 2022**)

JOURNALS

[J2] Deep Single-cell RNA-seq data Clustering with Graph Prototypical Contrastive Learning
Junseok Lee, Sungwon Kim, Dongmin Hyun, Namkyeong Lee, Yejin Kim, Chanyoung Park
Bioinformatics (2023)

[J1] Self-Supervised Graph Representation Learning via Positive Mining
Namkyeong Lee, **Junseok Lee**, Chanyoung Park
Information Sciences (2022)

WORKSHOPS

[W2] Single-cell RNA-seq data imputation using Feature Propagation
Sukwon Yun†, **Junseok Lee**†, Chanyoung Park
ICML Workshop on Computational Biology (**WCB 2023**) (**Best Paper, Contributed Talk**)

[W1] Deep Single-cell RNA-seq data Clustering with Graph Prototypical Contrastive Learning
Junseok Lee, Sungwon Kim, Dongmin Hyun, Namkyeong Lee, Yejin Kim, Chanyoung Park
ICML Workshop on Computational Biology (**WCB 2023**)

PROJECTS

Development of Artificial Intelligence-Based Insurance Claims Payout Prediction Model 2021
- Collaboration with Shinhan Life

TEACHING EXPERIENCE

Teaching Assistant
- IE343: Statistical Machine Learning Spring 2022
- KSE801: Special Topics in Knowledge Service Engineering
  <Recommender System and Graph Machine Learning> Fall 2022

PROFESSIONAL SERVICES

Journal Reviews
- IEEE Transactions on Neural Networks and Learning Systems (TNNLS)

TALKS AND SEMINARS

Sinlge-cell RNA-seq data imputation using Feature Propagation
- Contributed talk on ICML Workshop on Computation Biology (WCB) 2023

REFERENCES

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