

## RESEARCH INTERESTS

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Machine learning & deep learning based information retrieval and data mining. Especially interested in:

- Context-aware Sequential Recommendation Model
- Explainable Recommender System
- Parameter-efficient Recommendation Model
- Large Language Model for Recommender System
- Cross-domain Image Retrieval
- Deep Learning Applications for E-commerce

## WORK EXPERIENCE

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- **Dankook University** 2025.09 – current  
*Assistant Professor*
- **Korea Advanced Institute of Science & Technology** 2024.09 – 2025.08  
*Postdoctoral Researcher*
- **Intellisys Corp.** 2017.12 – 2020.08  
*Senior Researcher*
- **Stylewiki Corp.** 2014.09 – 2015.12  
*Senior Developer*

## EDUCATION

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- **Seoul National University** 2017.03 – 2024.08  
*Ph.D. in Computer Science and Engineering*
- **Yonsei University** 2010.03 – 2017.02  
*B.S. in Mathematics & Computer Science (double major)*

## PUBLICATIONS

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- [1] S. Park, H. Jeong, T. Djanibekov, G. Jeon, J. Seol, and J. Choi, On the relationship between populated regions and adversarial robustness in deep neural networks, The 25th IEEE International Conference on Data Mining (ICDM Short), 2025.
- [2] J. Seol and J. Choi, Context-aware negative sampling for sequential recommendation, IEEE Access, 2025.
- [3] J. Seol, Y. Ko, and S.-G. Lee, Parameter-efficiently Leveraging Session Information in Deep Learning based Session-aware Sequential Recommendation, IEEE Access, 2025.
- [4] H. Na, M. Gang, Y. Ko, J. Seol, and S.-g. Lee, Enhancing Large Language Model Based Sequential Recommender Systems with Pseudo Labels Reconstruction, Findings of the Association for Computational Linguistics: EMNLP 2024 (EMNLP Short Findings), 2024.
- [5] J. Seol, M. Gang, S.-g. Lee, and J. Park, Proxy-based Item Representation for Attribute and Context-aware Recommendation, The 17th ACM International Conference on Web Search and Data Mining (WSDM), 2024.
- [6] H. Lee, J. Seol, S.-g. Lee, J. Park, and J. Shim, Contrastive Learning for Unsupervised Image-to-image Translation, Applied Soft Computing, 2024.
- [7] S. Jang, H. Y. Kim, Y. Lee, J. Seol, S. Kim, and S. G. Lee, Deep learning for classification of high-end fashion brand sensibility, Journal of the Korean Society of Clothing and Textiles, 2022.

- [8] J. Seol, Y. Ko, and S.-g. Lee, Exploiting Session Information in BERT-based Session-aware Sequential Recommendation, Proceedings of the 45th International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR Short**), 2022.
- [9] J. Seol, S. Kim, S. Park, H. Lim, H. Na, E. Park, D. Jung, S. Park, K. Lee, and S.-g. Lee, Technologies for AI-Driven Fashion Social Networking Service with E-Commerce, Semantic Intelligence: Select Proceedings of ISIC 2022, 2023.
- [10] H. Cho, J. Seol, and S.-g. Lee, Masked Contrastive Learning for Anomaly Detection, The 30th International Joint Conference on Artificial Intelligence (**IJCAI**), 2021.
- [11] S. Kim, J. Seol, H. Lim, and S.-g. Lee, False Negative Distillation and Contrastive Learning for Personalized Outfit Recommendation, arXiv preprint arXiv:2110.06483, 2021.
- [12] H. Cho, C. Ahn, K. Min Yoo, J. Seol, and S.-g. Lee, Leveraging Class Hierarchy in Fashion Classification, Proceedings of the IEEE/CVF International Conference on Computer Vision Workshops (**ICCV Workshop**), 2019.
- [13] H. Lee, J. Seol, and S.-g. Lee, Style2vec: Representation Learning for Fashion Items from Style Sets, arXiv preprint arXiv:1708.04014, 2017.
- [14] S. Choi, T. Kim, J. Seol, and S.-g. Lee, A Syllable-based Technique for Word Embeddings of Korean Words, Proceedings of the First Workshop on Subword and Character Level Models in NLP (**EMNLP Workshop SCLeM**), 2017.
- [15] S. Choi, J. Seol, and S.-g. Lee, On Word Embedding Models and Parameters Optimized for Korean, 한국어정보학회: 학술대회논문집, 2016.
- [16] J. Seol and S.-g. Lee, lexranks: LexRank 기반 한국어 다중 문서 요약, 한국정보과학회 학술발표논문집, 2016.

## PATENTS

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- **The Automatic Recommendation System and Method of the Fashion Coordination** 1023070950000  
박성찬, 설진석, 안채민, 이상구
- **Electronic Device, Server and Method Thereof for Recommending Fashion Item** 1024649060000  
이한빛, 설진석, 이상구, 이형동

## TEACHING EXPERIENCE

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- **Teaching Assistant**  
*Seoul National University*
  - IT Entrepreneurship [M1522.002700] (2020 Fall)
  - Introduction to Databases [M1522.001800] (2017 Fall)
  - Digital Computer Concept and Practice [035.001] (2017 Spring)
  - Recommender Systems [4190.773] (2024 Spring)
- **Instructor**  
*Dankook University*
  - SW Convergence Coding II [529550] (2025 Fall)
  - Computer and Communication [478500] (2025 Fall)

## SCHOLARSHIPS AND AWARDS

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- Kfas Scholarship (Underground Scholarship in Mathematics) 2012.02 – 2015.02
- SW Maestro (Government Program, 2nd Tier Mentee) 2011.07 – 2012.07