YOUNG JIN PARK

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EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) — Cambridge, MA
***Ph.D. Student at MIT LIDS.* GPA: 5.0/5.0** — 2022 - Present
- Supervisor: Prof. Navid Azizan (azizan@mit.edu)
- Working on the *uncertainty quantification for unsupervised representations*.

KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY (KAIST) — Daejeon, Korea
***M.S. in Aerospace Engineering*. Converted GPA: 5.0/5.0** — 2017 - 2019
- Supervisor: Prof. Han-Lim Choi (hanlimc@kaist.ac.kr)
- Thesis: *Interpretable Unsupervised Learning of Bayesian Nonparametric Dynamic State-Space Model*. (Received Departmental M.S. Outstanding Paper Award)

KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY (KAIST) — Daejeon, Korea
***B.S. in Aerospace Engineering & Mathematical Sciences (minor)*. Converted GPA: 4.97/5.0** — 2013 - 2017
- KAIST Presidential Fellowship (awarded to top 10 students from the Class of 2017)

KOREA SCIENCE ACADEMY OF KAIST (KSA) — Busan, Korea
- Graduated with Academic Excellence Award — 2010 - 2013

WORK EXPERIENCE

NAVER AI LAB | CLOVA — Seongnam-si, Korea
Machine Learning Research Engineer — 2019 –2022
- Developed a user modeling using LLMs.
- Developed a 45M-scale ensemble forecasting system.
- Developed a 60M-scale recommender system.
- Developed efficient ML pipelines for the aforementioned large-scale, real-world systems.

RESEARCH SKILLS

- Uncertainty quantification & Probabilistic deep learning.
- User behavior modeling with large-language models (LLMs).
- Large-scale ensemble learning.
- Graph representation learning.
- Hierarchical reinforcement learning.

PUBLICATIONS

*Authors contributed equally; IF: Impact Factor

Selected Publications

1. **Representation Reliability and Its Impact on Downstream Tasks**
   Y.J. Park, H. Wang, S. Ardeshir, N. Azizan
   Preprint. arXiv:2306.00206, 2023.

2. **A Large-Scale Ensemble Learning Framework for Demand Forecasting**
   Y.J. Park, D. Kim, F. Odermatt, J. Lee, and K.M. Kim.
   In *IEEE International Conference on Data Mining (ICDM),* 2022. *(Full Paper, Acceptance rate: 9.77%)*

3. **Distilling a hierarchical policy for planning and control via representation and reinforcement learning**
   J.S. Ha*, Y.J. Park*, H.J. Chae, S.S. Park, and H.L. Choi.
   In *IEEE International Conference on Robotics and Automation (ICRA)*, 2021.
4. **A Worrying Analysis of Probabilistic Time-series Models for Sales Forecasting**
   S. Jung*, K.M. Kim*, H. Kwak*, and Y.J. Park*.
   In *Neural Information Processing Systems (NeurIPS), ICBINB Workshop, PMLR*, 2020. *(Best Poster Awards)*
5. **Adaptive Path-Integral Autoencoders: Representation Learning and Planning for Dynamical Systems**
   J.S. Ha, Y.J. Park, H.J. Chae, S.S. Park, and H.L. Choi.
   In *Neural Information Processing Systems (NeurIPS)*, 2018.
6. **Deep Matrix-variate Gaussian Process**
   Y.J. Park, P.M. Tagade, and H.L. Choi.
   In *UAI Workshop 2018: Uncertainty in Deep Learning &*
   IEEE Access, 2018. [IF: 4.098]

Other Publications

7. **VQ-AR: Vector Quantized Autoregressive Probabilistic Time Series Forecasting** (Preprint)
   K. Rasul, Y.J. Park, M. Ramström, and K.M. Kim.
8. **Online Gaussian Process SSM: Learning and Planning for Partially Observable Dynamical Systems**
   S.S. Park, Y.J. Park, Y. Min, and H.L. Choi.
   International Journal of Control, Automation and Systems, 2022. [IF: 3.314]
9. **One4all User Representation for Recommender Systems in E-commerce** (Preprint)
   K. Shin, H. Kwak K.M. Kim, M. Kim, Y.J. Park, J. Jeong, and S. Jung
10. **A neural process approach for probabilistic reconstruction of no-data gaps in lunar digital elevation maps**
    Y.J. Park, and H.L. Choi.
    Aerospace Science and Technology, 2021. [IF: 5.107].
11. **Bayesian Nonparametric SSM for System Identification with Distinguishable Multimodal Dynamics**
    Y.J. Park, S.S. Park, and H.L. Choi.
    Journal of Aerospace Information Systems, 2021. [IF: 1.076]
12. **Efficient Sensor Network Planning Method using Approximate Potential Game.**
    S.J. Lee, Y.J. Park, and H.L. Choi.
    International Journal of Distributed Sensor Networks, 2018. [IF: 1.787]

Workshops & Late-Breaking Results (Short Papers)

13. **Uncertainty-Aware Meta-Learning for Multimodal Task Distributions**
    C. Almecija, A. Sharma, Y.J. Park, and N. Azizan
    In *Neural Information Processing Systems (NeurIPS), Workshop on Meta-Learning*, 2022.
14. **Global-Local Item Embedding for Temporal Set Prediction**
    S. Jung, Y.J. Park, J. Jeong, K.M. Kim, H. Kim, M. Kim, and H. Kwak.
    In *ACM Recommender Systems (RecSys), Late-Breaking Results*, 2021.
15. **Adaptive Memory using Dynamic Graph Networks for Staleness Problem in Recommender System**
    I.J. Kwon, K.M. Kim, J. Jeong, K. Shin, Y.J. Park, and B.T. Zhang.
    In *Knowledge Discovery and Data mining (KDD), Workshop on OARS*, 2021. (Spotlight)
16. **Hop Sampling: A Simple Regularized Graph Learning for Non-Stationary Environments**
    Y.J. Park, K. Shin, and K.M. Kim.
    In *Knowledge Discovery and Data mining (KDD), Workshop on MLG*, 2020.
17. **Multi-Manifold Learning for Large-scale Targeted Advertising System**
    K. Shin, Y.J. Park, and K.M. Kim.
    In *Knowledge Discovery and Data mining (KDD), AdKDD Workshop*, 2020.

18. **div2vec: Diversity-Emphasized Node Embedding**
    J. Jeong, J.M. Yun, H. Keam, Y.J. Park, Z. Park, and J. Cho.
    In *ACM Recommender Systems (RecSys), Workshop on the IRS*, 2020.
19. **Tripartite heterogeneous graph propagation for large-scale social recommendation**
    K.M. Kim*, D. Kwak*, H. Kwak*, Y.J. Park*, S. Sim, J.H. Cho, M. Kim, J. Kwon, N. Sung, and J.W Ha.
    In *ACM Recommender Systems (RecSys)*, *Late-Breaking Results*, 2019.

ACADEMIC HONORS

Daishin Songchon Scholarship (Full Tuition Award)	2023 Fall – Present
SBS Scholarship (Full Tuition Award)	2022 Fall – 2023 Spring
Shangzhi Wu (1985) Fellowship	2022 Fall – 2023 Spring
Best Poster Awards, ICBINB@NeurIPS Workshop	2020
M.S. Outstanding Paper Award, Dept. of Aerospace Engineering, KAIST	2019
Young-Han Kim Global Leader Scholarship — Awarded to one M.S. student at KAIST	2018
Summa Cum Laude (Graduation Honors), KAIST	2017
GE Foundation Scholar-Leaders Program administered by Fulbright	2014-2016
Boeing Korea Scholarship	2014-2016
Samsung Electronics JFL Scholarship	2013-2016
KAIST Presidential Fellowship — Awarded to ten students from the Class of 2017	2013-2016