YOUNG JIN PARK

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RESEARCH INTEREST

- Machine learning and its application to real-world phenomena.
- Representation learning for structured data.
- Probabilistic latent variable models for dynamical systems.

EDUCATION

KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY (KAIST) Daejeon, Korea
M.S. in Aerospace Engineering (GPA: 4.12/4.30) Feb 2019
- Supervisor: Han-Lim Choi, Ph.D.
- Thesis: "Interpretable Unsupervised Learning of Bayesian Nonparametric Dynamic State-Space Model."
- *Departmental M.S. Outstanding Paper Award*

KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY (KAIST) Daejeon, Korea
B.S. in Aerospace Engineering & Minor in Mathematical Sciences (GPA: 4.03/4.30) Feb 2017
- *KAIST Presidential Fellowship* (10 selected among entire class of 2013 matriculation)
- *Departmental Exemplary Academic Achievement Award*

KOREA SCIENCE ACADEMY OF KAIST (KSA) Busan, Korea
- *Graduated with Academic Excellence Award* (GPA: 4.00/4.30) Feb 2013

PROFESSIONAL EXPERIENCE

NAVER CLOVA Seongnam-si, Korea
Research Engineer Feb 2019 - Present
- Developing a 45M-scale demand forecasting system using a multimodal contrastive learning.
- Developed a 60M-scale recommender system using graph representation learning.

KISWE New Providence, NJ
Intern Jun 2016 - Aug 2016
- Implemented a prototype of interactive ads for the Kiswe's social video app.

PUBLICATIONS & PRESENTATIONS

*Authors contributed equally; IF: Impact Factor

Machine Learning for Dynamical Systems

1. J.S. Ha*, **Y.J. Park***, H.J. Chae, S.S. Park, and H.L. Choi. "Distilling a hierarchical policy for planning and control via representation and reinforcement learning." In *IEEE International Conference on Robotics and Automation (ICRA)*, 2021.
2. **Y.J. Park**, S.S. Park, and H.L. Choi. "Bayesian Nonparametric State-Space Model for System Identification with Distinguishable Multimodal Dynamics." *Journal of Aerospace Information Systems*, 2021. [IF: 1.076] (The conference version is presented and selected as finalists of Intelligent Systems Student Paper Competition in *AIAA Scitech 2019 Forum*.)
3. S.S. Park, **Y.J. Park**, Y. Min, and H.L. Choi. "Online Gaussian Process State-Space Model: Learning and Planning for Partially Observable Dynamical Systems." *International Journal of Control, Automation and Systems* (accepted), 2022. [IF: 3.314]
4. S. Jung*, K.M. Kim*, H. Kwak*, and **Y.J. Park***. "A Worrying Analysis of Probabilistic Time-series Models for Sales Forecasting." In *Neural Information Processing Systems (NeurIPS), I Can't Believe It's Not Better Workshop*, 2020. **(Best Poster Awards)**
5. J.S. Ha, **Y.J. Park**, H.J. Chae, S.S. Park, and H.L. Choi. "Adaptive Path-Integral Autoencoders: Representation Learning and Planning for Dynamical Systems." In *Neural Information Processing Systems (NeurIPS)*, 2018. (The journal version is published in *Journal of Statistical Mechanics: Theory and Experiment*.)

Probabilistic Latent Variable Models

6. **Y.J. Park**, and H.L. Choi. "A neural process approach for probabilistic reconstruction of no-data gaps in lunar digital elevation maps." *Aerospace Science and Technology*, 2021. [IF: 5.107].
7. **Y.J. Park**, P.M. Tagade, and H.L. Choi. "Deep Gaussian Process-Based Bayesian Inference for Contaminant Source Localization." *IEEE Access*, 2018. [IF: 4.098].
   (The conference version is presented in *Uncertainty in Artificial Intelligence (UAI) 2018 Workshop on Uncertainty in Deep Learning*.)
8. **Y.J. Park**, S.H. Moon, and H.L. Choi. "High-Resolution Reconstruction for NoData Gaps in Narrow Angle Camera Digital Terrain Models Using Gaussian Process-Latent Variable Model." In *Lunar and planetary science conference (LPSC)*, 2018.

Relational Representation Learning

9. S. Jung, **Y.J. Park**, J. Jeong, K.M. Kim, H. Kim, , M. Kim, and H. Kwak. "Global-Local Item Embedding for Temporal Set Prediction." In *ACM Recommender Systems (RecSys), Late-Breaking Results*, 2021.
10. I.J. Kwon, K. Shin, J. Jeong, K.M. Kim, B.T. Zhang, and **Y.J. Park**. "AdamDGN: Adaptive Memory using Dynamic Graph Networks for Staleness Problem in Recommender System." In *Knowledge Discovery and Data mining (KDD), Workshop on Online and Adaptative Recommender Systems*, 2021. **(Spotlight)**
11. **Y.J. Park**, K. Shin, and K.M. Kim. "Hop Sampling: A Simple Regularized Graph Learning for Non-Stationary Environments." In *Knowledge Discovery and Data mining (KDD), Workshop on Mining and Learning with Graphs*, 2020.
12. K. Shin, **Y.J. Park**, and K.M. Kim. "Multi-Manifold Learning for Large-scale Targeted Advertising System." In *Knowledge Discovery and Data mining (KDD), AdKDD Workshop*, 2020.
13. J. Jeong, J.M. Yun, H. Keam, **Y.J. Park**, Z. Park, and J. Cho. "div2vec: Diversity-Emphasized Node Embedding." In *ACM Recommender Systems (RecSys), Workshop on the Impact of Recommender Systems*, 2020.
14. 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. "Tripartite heterogeneous graph propagation for large-scale social recommendation." In *ACM Recommender Systems (RecSys)*, *Late-Breaking Results*, 2019.

Cooperative Sensor Planning

15. S.J. Lee, **Y.J. Park**, and H.L. Choi. "Efficient Sensor Network Planning Method using Approximate Potential Game." *International Journal of Distributed Sensor Networks*, 2018. [IF: 1.787]

ACADEMIC HONORS

AWARDS

Best Poster Awards — ICBINB@NeuRIPS Workshop	Dec 2020
M.S. Outstanding Paper Award — Dept. of Aerospace Engineering, KAIST	Feb 2019
3rd Place, Award of Excellence — KSIAM-Math Works Problem Challenge	Nov 2017
Exemplary Academic Achievement Award — Dept. of Aerospace Engineering, KAIST	Sep 2017
Graduation Honors (Summa Cum Laude) — KAIST	Feb 2017
3rd Place — KSAS Undergraduate Student Paper Competition	Mar 2015
Academic Honors Student — Dept. of Aerospace Engineering, KAIST	2016

SCHOLARSHIPS

Young-Han Kim Global Leader Scholarship	2018
GE Foundation Scholar-Leaders Program — administered by Fulbright and IIE	2014-2016
Boeing Scholarship	2014-2016
Samsung Electronics JFL Scholarship	2013-2016
KAIST Presidential Fellowship — 10 selected among entire class of 2013 matriculation	2013-2016