YOUNG JIN PARK

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EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) — Cambridge, MA
Ph.D. Candidate at MIT LIDS. GPA: 5.0/5.0 — Sept. 2022 – June 2026
- Supervisor: Navid Azizan
- Working on the *Uncertainty Quantification in Foundation Models*.

KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY (KAIST) — Daejeon, Korea
M.S. in Aerospace Engineering. GPA: 4.12/4.3 — Feb. 2017 – Feb. 2019
- Supervisor: Han-Lim Choi
- Thesis: *Interpretable Unsupervised Learning of Bayesian Nonparametric Dynamic State-Space Model*.

KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY (KAIST) — Daejeon, Korea
B.S. in Aerospace Engineering & Mathematical Sciences (minor). GPA: 4.03/4.3 — Mar. 2013 – Feb. 2017
- KAIST Presidential Fellow (awarded to top 10 students from the Class of 2017)

KOREA SCIENCE ACADEMY OF KAIST (KSA) — Busan, Korea
GPA: 4.00/4.3 (graduated with academic excellence award) — Feb. 2010 – Feb. 2013

PROFESSIONAL EXPERIENCE

MITSUBISHI ELECTRIC RESEARCH LABORATORIES (MERL) — Cambridge, MA
Intern — May 2024 – Aug. 2024

MIT-IBM WATSON AI LAB — Cambridge, MA
Visiting Student Researcher — Mar. 2024 – May 2024

NAVER AI LAB | CLOVA — Seongnam-si, Korea
Machine Learning Research Engineer — Feb. 2019 – Aug. 2022

RESEARCH INTERESTS

AREAS: Machine Learning, Uncertainty Quantification, Autonomous Systems
TOPICS: Trustworthy AI, Cost-Efficient LLMs, Recommender Systems, Planning & Control

PUBLICATIONS

*Authors contributed equally; IF: Impact Factor

Peer-Reviewed Conference Proceedings

1. **Understanding and Quantifying Reliability in Object Detection Transformers** (preprint)
   Y.J. Park*, C. Sobolewski*, A. Sharma, and N. Azizan.

2. **Probabilistic Forecasting for Building Energy Systems: Are Time-Series Foundation Models the Answer?** (preprint)
   Y.J. Park, J. Liu, F. Germain, T. Koike-Akino, G. Wichern, and A. Chakrabarty.

3. **Quantifying Representation Reliability in Self-Supervised Learning Models**
   Y.J. Park, H. Wang, S. Ardeshir, and N. Azizan.
   In *Conference on Uncertainty in Artificial Intelligence (UAI),* 2024 &
   In *RSS 2023 Workshop @ Safe Autonomy (Spotlight).*

4. **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%)*

5. **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.
6. **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)*
7. **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. *(Acceptance rate: 30.9%)*
8. **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 &
   Journal of Statistical Mechanics: Theory and Experiment, 2019.

Journal Publications

9. **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]
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.
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.
13. **Deep Matrix-variate Gaussian Process**
    Y.J. Park, P.M. Tagade, and H.L. Choi.
    IEEE Access, 2018. [IF: 4.098] &
    In *UAI Workshop 2018: Uncertainty in Deep Learning*

Short Papers & Preprints

14. **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.
15. **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.
16. **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)
17. **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.
18. **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.

19. **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.

20. **VQ-AR: Vector Quantized Autoregressive Probabilistic Time Series Forecasting**
K. Rasul, Y.J. Park, M. Ramström, and K.M. Kim.

21. **One4all User Representation for Recommender Systems in E-commerce**
K. Shin, H. Kwak K.M. Kim, M. Kim, Y.J. Park, J. Jeong, and S. Jung

SELECTED PRESENTATIONS

Conference on Uncertainty in Artificial Intelligence 2024 (Poster)	July 2024
LG AI Tech CONNECT	Oct. 2023
Robotics: Science and Systems, Workshop (Spotlight Presentation)	July 2023
MIT-IBM Watson AI Lab	June 2023
NAVER DEVIEW 2021 — The secrets Behind NAVER's Demand Forecasting: HyperCLOVA	Nov. 2021
International Conference on Computer Vision, Workshop (Poster)	Oct. 2019

MENTORSHIP

Carson Sobolewski (University of Florida, summer intern at MIT), 2024
- *Project: Uncertainty quantification in object detection Transformer*.

Frédéric Odermatt (ETH Zürich MSc, intern at NAVER CLOVA), 2021-2022
- *Project: A large-scale deep forecasting models (published a paper in ICDM 2022).*

Donghyun Kim (Seoul National University, intern at NAVER CLOVA), 2021-2022
- *Project: An ensemble framework for demand forecasting (published a paper in ICDM 2022).*

ACADEMIC HONORS

SELECTED AWARDS

Wunsch Foundation Silent Hoist and Crane Award for excellence in a graduate student — Dept. of Mechanical Engineering, MIT	July 2024
Sontheimer Travel Award — *Dept. of Mechanical Engineering, MIT*	Nov. 2023
Best Poster Awards — *ICBINB@NeuRIPS Workshop*	Dec. 2020
M.S. Outstanding Paper Award — *Dept. of Aerospace Engineering, KAIST*	Oct. 2019
3rd Place — KSIAM-Math Works Problem Challenge	Nov. 2017
Exemplary Academic Achievement Award — Dept. of Aerospace Engineering, KAIST	Sept. 2017
Summa Cum Laude (Graduation Honors) — KAIST	Feb. 2017
Academic Honors Student — Dept. of Aerospace Engineering, KAIST	Mar. 2015

FELLOWSHIPS / SCHOLARSHIPS

Shangzhi Wu (1985) Fellowship	2022 F. – 2023 S.
Young-Han Kim Global Leader Scholarship — Awarded to one M.S. student at KAIST	2018 S. – 2018 F.
GE Foundation Scholar-Leaders Program — Administered by Fulbright and IIE	2014 S. – 2016 F.
Boeing Scholarship	2014 S. – 2016 F.
Samsung Electronics JFL Scholarship	2013 S. – 2016 F.
KAIST Presidential Fellowship — Awarded to top 10 students from the Class of 2017	2013 S. – 2016 F.