Jung Yeon Park

Khoury College of Computer Sciences, Northeastern University

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Education

Northeastern University **Boston, MA**
Ph.D. in Computer Science *2019–present*
(Advisor: Lawson Wong, Robin Walters)

Northeastern University **Boston, MA**
M.S. in Computer Science *2022*

KAIST **Daejeon, South Korea**
M.S. in Industrial Systems Engineering *2016*
(Advisor: James R. Morrison)

KAIST **Daejeon, South Korea**
B.S. in Industrial Systems Engineering *2014*

Research/Work Experience

JP Morgan Chase AI Research **New York, NY**
Summer Research Associate *Jun 2024–Aug 2024*
Researched approximate equivariance in reinforcement learning for application to financial time series

The AI Institute **Cambridge, MA**
Research Intern *Jan 2024–May 2024*
Investigated the importance of pretraining in foundation models for point clouds for downstream manipulation.

Northeastern University, Khoury College of Computer Sciences **Boston, MA**
Graduate Assistant *2019–present*
Research areas: Reinforcement learning, Equivariant neural networks, Imitation learning

Samsung Electronics, DS Division **Hwaseong, South Korea**
Software Engineer *2016–2019*
Developed production APIs and client libraries for big data analysis. Managed and scaled up big data ML platform to become largest in semiconductor division. Implemented new ETL pipeline.

KAIST, Department of Industrial Systems Engineering **Daejeon, South Korea**
Graduate Research Assistant *2016–2014*
Thesis: Evaluation of Equipment Models of Clustered Photolithography Tools for Semiconductor Fab Simulation

KAIST, Department of Industrial Systems Engineering **Daejeon, South Korea**
Undergraduate Research Assistant *2013*
Thesis: Financial Modeling and Simulation of the Case of Diamond Fund

Publications

* Equal Contribution

Publications

Colin Kohler, Nathan Vaska, Ramya Muthukrishnan, Whangbong Choi, **Jung Yeon Park**, Justin Goodwin, Rajmonda Caceres, and Robin Walters. Symmetric models for radar response modeling. In *NeurIPS 2023 Workshop on Symmetry and Geometry in Neural Representations*, 2023.

Jung Yeon Park, Lawson L.S. Wong, and Robin Walters. Modeling dynamics over meshes with gauge equivariant nonlinear message passing. In *Advances in Neural Information Processing Systems (NeurIPS)*, 2023.

Dian Wang, Xupeng Zhu, **Jung Yeon Park**, Robert Platt, and Robin Walters. A general theory of correct, incorrect, and extrinsic equivariance. In *Advances in Neural Information Processing Systems (NeurIPS)*, 2023.

Dian Wang, **Jung Yeon Park**, Neel Sortur, Lawson L.S. Wong, Robin Walters, and Robert Platt. The surprising effectiveness of equivariant models in domains with latent symmetry. In *International Conference on Learning Representations (ICLR)*, 2023. (**notable-top-25%**).

Jung Yeon Park and Lawson L.S. Wong. Robust imitation learning of a few demonstrations with a backwards model. In *Advances in Neural Information Processing Systems (NeurIPS)*, 2022.

Jung Yeon Park*, Ondrej Biza*, Linfeng Zhao, Jan Willem van de Meent, and Robin Walters. Learning symmetric representations for equivariant world model. In *International Conference on Machine Learning (ICML)*, 2022.

Jung Yeon Park*, Niklas Smedemark-Margulies*, Max Daniels, Rose Yu, Jan-Willem van de Meent, and Paul Hand. Generator surgery for compressed sensing. In *NeurIPS 2020 Workshop on Deep Learning and Inverse Problems*, 2020.

Jung Yeon Park, Kenneth Carr, Stephan Zheng, Yisong Yue, and Rose Yu. Multiresolution tensor learning for efficient and interpretable spatial analysis. In *International Conference on Machine Learning (ICML)*, pages 7499–7509. PMLR, 2020.

Hyeong-Ook Kim, Se-Hyeon Park, **Jung Yeon Park**, and James R. Morrison. On the consequences of un-modeled dynamics to the optimality of schedules in clustered photolithography tools. In *2019 Winter Simulation Conference (WSC)*, pages 2224–2235. IEEE, 2019.

Jung Yeon Park, Kyungsu Park, and James R Morrison. Models of clustered photolithography tools for fab-level simulation: From affine to flow line. *IEEE Transactions on Semiconductor Manufacturing*, 30(4):547–558, 2017.

Jung Yeon Park, Kyungsu Park, and James R Morrison. Exit recursion models of clustered photolithography tools for fab level simulation. *IEEE Transactions on Semiconductor Manufacturing*, 30(1):39–51, 2016.

Patents

James R. Morrison, **Jung Yeon Park**, Kyungsu Park, and Sang Yoon Bae. An exit recursion model of an apparatus of clustered photolithography for achieving fab(wafer fabrication facilities)-level simulation, and a method for simulating using it. South Korea Patent Office, 1018856190000, July 2018.

James R. Morrison, **Jung Yeon Park**, Kyungsu Park, and Sang Yoon Bae. A model for an apparatus of clustered photolithography for achieving fab(wafer fabrication facilities)-level simulation, and a method for simulating using it. South Korea Patent Office, 1018668570000, June 2018.

Awards and Honors

- **Scholar Award**, NeurIPS Conference 2023
- **Achievement Prize**, Samsung Electronics 2017

- **Government Scholarship** for full tuition and stipend for M.S. 2014-2016
- **Excellence Prize** (tied for 1st), KAIST IE Frontier, for undergraduate thesis 2013

Service

Teaching Assistantship

CS5335 Robotic Science and Systems: Northeastern University Spring 2022
CS5180 Reinforcement Learning: Northeastern University Fall 2021
CS4100 Artificial Intelligence: Northeastern University Spring 2021
CS7180 Special Topics in Artificial Intelligence: Northeastern University Fall 2020

Reviewer

IEEE RA-L (2022), AISTATS (2023, 2024), ICML (2023, 2024, 2025), NeurIPS (2023, 2024), ICLR (2024)

Organizing

Co-organizer of Boston Symmetry Day Spring 2023, Fall 2023