Jung Yeon (John) Park

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https://jypark0.github.io

EDUCATION

Northeastern University Sept. 2019 – present
Ph.D. in Computer Science (Advisor: Rose Yu) Boston, USA

- Research Areas: machine learning, multi-resolution methods, stochastic processes
- GPA: 4.0/4.0

Korea Advanced Institute of Science and Technology (KAIST) Mar. 2014 – Feb. 2016
M.S. in Industrial & Systems Engineering (Advisor: James R. Morrison) Daejeon, Korea

- Thesis: *Evaluation of Equipment Models of Clustered Photolithography Tools for Semiconductor Fab Simulation*
- GPA: 4.15/4.3

Korea Advanced Institute of Science and Technology (KAIST) Sep. 2006 – Mar. 2014
B.S in Industrial & Systems Engineering, minor in Mechanical Engineering Daejeon, Korea

- Thesis: *Financial Modeling and Simulation of the Case of Diamond Fund*
- Mandatory military service from 2010 ~ 2012
- GPA: 3.29/4.3

RESEARCH EXPERIENCE

Korea Advanced Institute of Science and Technology (KAIST) Mar. 2014 – Feb. 2016
Graduate Research Assistant Daejeon, Korea

- Evaluated regression and queuing network models on semiconductor tool performance with respect to accuracy, computation, and robustness to mismatched training and test datasets
- Developed new class of algorithms with near accuracy of queuing network models while requiring 250 times less computation

Korea Advanced Institute of Science and Technology (KAIST) Jun. 2013 – Sep. 2013
Undergraduate Research Assistant Daejeon, Korea

- Modeled derivative loan structure of the Diamond Fund and performed geometric Brownian motion Monte Carlo simulations to predict mean bond payoff

WORK EXPERIENCE

Samsung Electronics, DS Division, Smart Manufacturing Group Feb. 2016 – Mar. 2019
Software Engineer Hwaseong, Korea

- Software development: Developed APIs and client libraries for data extraction, implemented streaming JSON data to improve memory allocation and extraction performance up to ~8 times.
- Analytics Platform: Helped expand our big data analytics platform to span multiple datacenters to become largest in the semiconductor division.
- Data integration: Implemented new ETL tool, increasing performance by 30% with 65% less resources

AWARDS AND HONORS

- **Achievement Prize**, Samsung Electronics System Engineering Team, for successful expansion of the Big Data on Cloud platform — Jun. 2017
- **Government Scholarship** with stipend for full two years of master's — 2014 – 2016
- **Excellence Prize** (tied for 1st place) at 2013 KAIST IE Frontier, for undergraduate thesis — Sept. 2013

PUBLICATIONS

- **J. Y. Park**, K. T. Carr, S. Zheng, Y. Yue, R. Yu, "Multiresolution Tensor Learning for Efficient and Interpretable Spatial Analysis." *37th International Conference on Machine Learning 2020 (ICML)*. (Acceptance rate: 21.8%)
- H. O. Kim, S. H. Park, **J. Y. Park**, J. R. Morrison, "On the Consequences of Un-Modeled Dynamics to the Optimality of Schedules in Clustered Photolithography Tools." *2019 Winter Simulation Conference (WSC)*, 2224-2235, Dec. 2019.
- **J. Y. Park**, K. Park, J. R. Morrison, "Models of Clustered Photolithography Tools for Fab-Level Simulation: From Affine to Flow Line." *IEEE Trans. on Semiconductor Manufacturing*, 30(4), 547-558, Nov. 2017.
- **J. Y. Park**, K. Park, J. R. Morrison, "Exit Recursion Models of Clustered Photolithography Tools for Fab Level Simulation." *IEEE Trans. on Semiconductor Manufacturing*, 30(1), 39-51, Feb. 2017.

PATENTS

- J. R. Morrison, **J. Y. Park**, K. Park, S. Y. Bae, "Exit Recursion Models of Clustered Photolithography Tools for Fab Level Simulation", South Korea Patent Office, 1018856190000, Jul. 31, 2018.
- J. R. Morrison, **J. Y. Park**, K. Park, S. Y. Bae, "Models of Clustered Photolithography Tools for Fab-Level Simulation: From Affine to Flow Line", South Korea Patent Office, 1018668570000, Jun. 5, 2018.