Youngsuk Park | Résumé

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Keywords: machine learning, optimization, reinforcement learning, time-series analysis

Education

Stanford University **Stanford, CA**
Ph.D. Candidate in Electrical Engineering, 4.0/4.0 *Jun. 2020*
Advisors: Stephen Boyd and Jure Leskovec

Stanford University **Stanford, CA**
M.S. in Electrical Engineering *Jan. 2016*

Korea Advanced Institute of Science and Technology **Daejeon, South Korea**
B.S. in Electrical Engineering, Minor in Mathematics, Summa Cum Laude *Jun. 2013*

Work Experience

Adobe Research **San Jose**
Data Science Research Intern *Jun.–Sept. 2019*
- Develop a structured reinforcement learning algorithm in continuous space.
- Apply for an efficient cloud management service, improving $\sim 20-40\%$ resource waste and $\sim 70\%$ risk overhead.
- Submit two papers to SoCC and ICML.

Criteo Artificial Intelligence Labs **Palo Alto**
Research Scientist Intern *Jun.–Sept. 2018*
- Develop an off-policy learning RL algorithm under a function approximation with convergence guarantees.
- Apply the algorithm for the off-line evaluation of new policy without executing it on a bidding system online.

Bosch Center for Artificial Intelligence **Palo Alto**
Machine Learning Intern *Jun.–Sept. 2017*
- Develop an adaptive rule of spectral stepsize selections for optimization, solving machine learning problems.
- Submit to ICASPP (short version) and PKDD (journal version).

Research

Y. Park et al., "Structured Neural Network for Learning Undirected Graphical Models", in preparation.

Y. Park et al., "Structured Policy Iteration for Linear Quadratic Regulator", in preparation.

H. Maei, **Y. Park**, "Convergent Actor-Critic under Off-policy and Function Approximation", in preparation.

J. Kim, **Y. Park**, J.Fox, S. Boyd, W. Dally, "Model Predictive Control for Engine and Battery Management", submitted to American Control Conference (ACC), 2019.

Y. Park, K. Mahadik, R. Rossi, G. Wu, H. Zhao, "Linear Quadratic Regulator for Resource-Efficient Cloud Services", accepted ACM Symposium on Cloud Computing (SOCC) Poster Session, 2019.

Y. Park, E. K. Ryu, "Linear Convergence of Cyclic SAGA", accepted to Optimization Letters, 2019.

Y. Park, D. Hallac, S. Boyd, J.Leskovec, "Learning the Network Structure of Heterogeneous Data via Pairwise Exponential Markov Random Fields", International Conference on Artificial Intelligence and Statistics (AISTATS), 2017.

D. Hallac, **Y. Park**, S. Boyd, J.Leskovec, "Inferring Time Varying Networks via Graphical Lasso", ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2017.

Y. Park, S.Boyd, S. Dhar, M. Shah, "Variable Metric Proximal Gradient Method with Diagonal Barzilai-Borwien Stepsize", Neural Information Processing Systems (NIPS), Optimization for Machine Learning Workshop, 2017.

Honor & Awards

Hyundai Global Forum, 1st-rank Presenter in AI Session (awarded $ 3,000) *Aug. 2018*

Kwanjeong Graduate Fellowship (awarded $ 110,000 over 2 years) *2013-2015*

Fulbright Graduate Fellowship (Declined) *Mar. 2013*

Korean National Science & Technology Scholarship *2006-2010*

Seminars

Hyundai Artificial Intelligence Lab
Time-series Network Inference for Event Detections *Jun. 2019*

Kakao Brain
Inferring Undirected Graphical Models from Heterogeneous Data *Mar. 2017*

Relevant Coursework

Machine Learning/Reinforcement Learning: Artificial Intelligent (CS221), Machine Learning (CS229), Statistical Learning Theory (CS229T), Reinforcement Learning (CS234 and MS&E 338)

Optimization/Control: Convex Optimization 1 & 2, Introduction to Optimization Theory, Large-scale Numerical Optimization, Dynamic Programming and Optimal Control

Statistics/Mathematics: Theory of Probability A, Theory of Statistics B, Numerical Linear Algebra, Real Analysis 1&2, Lebesque Integral, Differential Geometry, etc.

Information Theory: Information Theory, Universal Schemes in Information Theory, Network Information Theory.

Technical Skills

Programming: Python, TensorFlow, PyTorch, C++, Git, LaTeX