Youngsuk Park | Résumé

+1 (650) 422-8541, youngsuk@cs.stanford.edu

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

Education

Stanford University   **Stanford, CA**
Ph.D. Candidate in Electrical Engineering, 4.0/4.0   *In Progress*
Co-advisors: Stephen Boyd and Jure Leskovec
- Dissertation: *Topics in Convex Optimization for Machine Learning*

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 (application) and ICML (theory).

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).

Stanford InfoLab   **Stanford**
Research Associate   *Feb.–Aug. 2016*
- Develop a scalable method that infers the sequence of undirected graphical model (DARPA project).
- Use this inference method for event detection with various types of temporal dynamic evolution.

Convex Optimization II   **Stanford**
Head Teaching Assistant   *Mar.–Jun. 2015*

Research

H. Maei, **Y. Park**. "Convergent Actor-Critic under Off-policy and Function Approximation". In preparation to submit to *Neural Information Processing Systems (NeurIPS)*.

Y. Park, J.Kim, M.Zitnik, J. Leskovec, S. Boyd. "Structured Neural Network for Learning Undirected Graphical Models". In preparation to submit to *Neural Information Processing Systems (NeurIPS)*.

Y. Park, Z. Wen, R. Rossi, G. Wu, H. Zhao, S. Boyd. "Structured Policy Iteration for Linear Quadratic Regulator". Submitted to *International Conference on Machine Learning (ICML)*.

Y. Park, S. Dhar, S.Boyd, M. Shah. "Variable Metric Proximal Gradient Method with Diagonal Barzilai-Borwien Stepsize". To appear in *Proceedings of International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2020. (*NeurIPS* Workshop, 2017.)

J. Kim, **Y. Park**, J.Fox, S. Boyd, W. Dally. "Optimal Operation of a Plug-in Hybrid Vehicle with Battery Thermal and Degradation Model". To appear in *Proceedings of the American Control Conference (ACC)*, 2020.

Y. Park, E. K. Ryu. "Linear Convergence of Cyclic SAGA". *Optimization Letters*, 2020.

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

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

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

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