Jaehyun Park, Ph.D.

http://jaehyunp.me
jpark@cs.stanford.edu

EDUCATION

- Ph.D. in Computer Science, Stanford University, 2017
  ◇ Co-advised by Stephen Boyd and Leonidas Guibas.
  ◇ Research Interests: Convex optimization, machine learning, combinatorial algorithms
  ◇ Dissertation: *Approximation techniques for mixed-integer quadratic programs*
- B.S. in Computer Science, Stanford University, 2012
- Full financial support by Samsung Scholarship, 2008–2017

WORK EXPERIENCE

- Researcher at a private company, 2021–Present
- Research scientist at Facebook, Ads Core ML team, 2017–2021
  ◇ Tech lead of a 4-engineer team, solving problems in the intersection of ML and systems.
  ◇ Developed a feature exploration platform to enable quick experimentation with new ML feature ideas.
  ◇ Acted as a strategist to formulate delivery paths and backup plans for projects dependent on unbuilt infra capabilities.
  ◇ Developed alternative measurement and roll-out methods to enable quick data- and signal-level iterations.
  ◇ Built a real-time platform that collects large-scale signals, extracts semantic information, and aggregates them into user profiles for personalized ads across Facebook.
  ◇ Developed a user-ad fuzzy matching algorithm to improve semantic relevance.
- Research intern at Instagram ads delivery, 2016
- Research intern at Microsoft Research (with prof. Sham Kakade), 2013
- Software engineer intern at: imo.im in 2011, Facebook in 2009

RESEARCH

- J. Park, *Approximation techniques for mixed-integer quadratic programs*, Ph.D. dissertation, Stanford University, 2017.
- J. Park and Stephen Boyd, *General heuristics for nonconvex quadratically constrained quadratic programming*, arXiv:1703.07870, 2017.
- J. Park and S. Boyd, *A semidefinite programming method for integer convex quadratic minimization*, Optimization Letters, 2017.
- J. Park, *Sparsity-Preserving Difference of Positive Semidefinite Matrix Representation of Indefinite Matrices*, arXiv:1609.06762, 2016.
- J. Park and S. Boyd, *Concave quadratic cuts for mixed-integer quadratic problems*, arXiv:1510.06421, 2015.
- J. Park and Maurizio Calo, *Symbolic Subdifferentiation in Python*, Independent work, 2011.
- J. Park and Andrew Ng, *Recognizing Human Actions in Videos*, Stanford CURIS project, 2010.

TEACHING

- Co-instructor: Convex Optimization Short Course, ShanghaiTech University, 2016
- Instructor: Introduction to Competitive Programming Contests, 2012 (http://cs97si.stanford.edu)
- ACM-ICPC Pacific Northwest Problem Setter, 2015–Present
- Stanford ACM-ICPC Coach and Problem Setter, 2010–2015
- USA Computing Olympiad (USACO) Coach and Problem Setter, 2008–2011

AWARDS/HONORS/SCHOLARSHIP

- ACM International Collegiate Programming Contest (ACM-ICPC)
  ◇ World Finals 2010: North America Champions
  ◇ World Finals 2009: 20th place
- William Lowell Putnam Mathematical Competition
  ◇ 2010: Honorable Mentioned Team
  ◇ 2009: Honorable Mention
- International Olympiad in Informatics (IOI)
  ◇ 2006: Gold Medal (2nd place worldwide)
- Stanford Tau Beta Pi Engineering Honors Society
- The Frederick Emmons Terman Engineering Scholastic Award, 2012