(267) 777 8093
kshi@cs.columbia.edu
www.cs.columbia.edu/~kshi
U.S. Citizen

Kevin Shi

Education

2014–current **Ph. D. in Computer Science**, *Columbia University*.
Coadvised by Daniel Hsu and Allison Bishop
Research interests: algorithms, statistical learning theory, nonconvex optimization, cryptography

May 2017 **M. Phil in Computer Science** , *Columbia University*.
Subject: stochastic optimization

2012–2014 **M. A. in Mathematics**, *University of Pennsylvania*.

2010–2014 **B. S. in Computer Science and Mathematics**, *University of Pennsylvania*.
Magna Cum Laude. Honors in Mathematics

Experience

Industry

05/2018–08/2018 **Software Engineering Intern, PhD**, *Google*, Mountain View, CA.
Researched new models for click-through-rate prediction in Tensorflow. Investigated model selection techniques across hundreds of different data sets simultaneously.

05/2017–08/2017 **Data Science Intern**, *Button*, New York, NY.
Researched and implemented models for adaptive anomaly detection in Python. Enabled automatic learning and tracking of new partner launches. Deployed models to process all production data in real time

05/2014–08/2014 **Computer Vision Intern**, *Lily Robotics*, Boston, MA.
Researched and implemented a vision-based people tracking system in C++ and OpenCV for use on a quadrotor platform. Used techniques from multiscale object detection, online machine learning, and sensor fusion

05/2013–08/2013 **Research Intern**, *MIT Lincoln Laboratory*, Lexington, MA.
Designed feature extraction algorithms for time series obtained from radar. Wrote internal paper

Research

09/2014–current **Graduate Research Assistant**, *Algorithmic Statistics Group*, Columbia University.
Designing provable algorithms for nonconvex optimization problems in machine learning. Characterizing the behavior of first-order algorithms on nonconvex landscapes

09/2014–current **Graduate Research Assistant**, *Cryptography Lab*, Columbia University.
Designing provable obfuscation schemes from simple assumptions. Applying cryptography and obfuscation to design machine learning systems secure against adversarial examples

Other

09/2016–12/2016 **Teaching Assistant**, *COMS W4444 Programming and Problem Solving*, Columbia University.
Designed and implemented simulators for multiplayer games with student code using Java, Javascript, and Google Cloud

Publications

A. Bishop, L. Kowalczyk, T. Malkin, V. Pastro, M. Raykova, and K. Shi*. A simple obfuscation scheme for pattern-matching with wildcards. In *International Cryptology Conference*, 2018.

Daniel Hsu, Kevin Shi, and Xiaorui Sun*. Linear regression without correspondence. In *Advances in Neural Information Processing Systems 30*, 2017.

Alexandr Andoni, Daniel Hsu, Kevin Shi, and Xiaorui Sun*. Correspondence retrieval. In *Proceedings of the 2017 Conference on Learning Theory*, 2017.

Jimmy Wang, Kevin Shi, Alan Stocker, and Daniel Lee. Optimal neural tuning for arbitrary stimulus priors. In *Computational and Systems Neuroscience*, 2012.

Awards

03/2018 **Oscar and Verna Byron Fellowship**, Columbia University.
04/2017 **Computer Science Service Award**, Columbia University.
09/2014 **PennApps Hackathon**, *Top 20*, University of Pennsylvania.
09/2013 **PennApps Hackathon**, *Top 20*, University of Pennsylvania.
12/2012 **Putnam Math Competition**, *Top 500*.
10/2012 **SAP Code Slam Grand Finals**, *1st Place*.

Technical Skills

Proficient in Python, Tensorflow, Matlab, Java. Familiar with C++, OpenCV

*authors ordered alphabetically