Junhyung Lyle Kim

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Education

Rice University *Houston, TX*
Ph.D. in Computer Science *Aug 2019 - 2024 (expected)*

- Advisor: Prof. Anastasios Kyrillidis `[website]`
- Research interests: convex and non-convex optimization; quantum optimization; statistical machine learning

University of Chicago *Chicago, IL*
B.A. in Mathematics; B.A. in Statistics *Jun 2017*

- General Honors; Dean's List 2013-2017

Technical Skills

Software	UndersmoothedUnfolding (C++) `[link]`, sgd (R package) `[link]`
Data Science	Python, R, SQL, STATA, Matlab, ROOT (CERN)
Programming	C++/C, Java
Environments	Amazon Web Services (EC2, S3, Elastic Map Reduce), Linux/Unix Shells, Git
Others	MS Office Suite, VBA, Adobe Illustrator, Bloomberg, FactSet, Capital IQ, Thomson ONE

Working Papers

[1] **J. L. Kim**, A. Kyrillidis, "More than low-rankness in compressed sensing quantum state tomography"

[2] **J. L. Kim**, P. Toulis, A. Kyrillidis, "Accelerated implicit gradient methods for robust and accelerated optimization"

[3] **J. L. Kim**, S. Misra, P. Toulis, "Exact inference of large-scale inverse reinforcement learning with stochastic gradient descent"—*submitted*

[4] **J. L. Kim**, M. Kuusela, "Debiased uncertainty quantification in unfolding elementary particle spectra at the Large Hadron Collider"

Invited Talks

[1] Working group in Econometrics, Department of Economics, University of Chicago (Jun 2018)

[2] Prof. Michael L. Stein Group, Department of Statistics, University of Chicago (May 2017)

Research Experience

Booth School of Business, University of Chicago *Chicago, IL*
Research Assistant to Prof. Panos Toulis, Prof. Sanjog Misra *Jun 2017 - Jul 2019*

- Developed stochastic approximation-based method for exact inference of large-scale inverse reinforcement learning with applications to discrete choice models in Econometrics

Department of Statistics, University of Chicago *Chicago, IL*
Research Assistant to Prof. Mikael Kuusela; Supervisor: Prof. Michael L. Stein *Oct 2016 - Jun 2017*

- Implemented undersmoothing technique to find optimal regularization parameter for uncertainty quantification in high-energy physics unfolding problem in ROOT; published software on Github `[link]`

Booth School of Business, University of Chicago *Chicago, IL*
Research Assistant to Prof. Oleg Urminsky *Jan 2016 - Apr 2016*

- Wrote STATA script that automatically fills in information of each data point for 600+ excel files by searching master database; further adjusted master database to improve accuracy of each data file

Professional Experience

Dimensional Fund Advisors   *Austin, TX*
Research Intern, Investment Analytics & Data Group   *Jun 2016 - Sep 2016*

- Researched about FactSet dynamic financial data of over 50,000 securities; determined their accuracy and reliability in order to construct an automated checking system for current primary data source (Bloomberg)
- Developed VBA tool to compare two datasets that produces basic statistics and visualizes differences

Cook M&A Advisory Services   *Chicago, IL*
Investment Banking Summer Analyst   *Jun 2015 - Aug 2015*

- Organized and cleaned data for 7 buy-side projects by eliminating duplicates and inadequate components using MS Excel and VBA; drafted each client document through further qualitative research

Freenters, Inc.   *Chicago, IL*
Operations Intern   *Aug 2014 - Jan 2015*

- Developed MS Excel VBA algorithm that sends automatically personalized emails to a mass contact list
- Designed new posters and company logo in Scalable Vector Graphics format using Adobe Illustrator

Republic of Korea Special Warfare Training Group (SWTG)   *Gyeonggi, South Korea*
Special Forces Sergeant / Aide-de-Camp to Commander of SWTG   *Jan 2012 - Oct 2013*

- Selected out of 1000+ soldiers to aid Commander of SWTG; completed various trainings including Airborne training (certified paratrooper license #748-416) and maritime infiltration training