Jeongyeol Kwon

Contact Information

EER 6.822, 2501 Speedway, The University of Texas at Austin, Austin, TX 78712
Tel: (512)981-9126 *E-mail:* kwonchungli@utexas.edu

Education

The University of Texas at Austin, TX
Ph.D. in Electrical and Computer Engineering. 2017.8 - present

Seoul National University (SNU), Seoul, Korea
B.S. in Electrical Engineering, GPA 4.00/4.30 2008.3 - 2016.2

Seoul Science High School, Seoul, Korea
High school diploma with distinction in 2 years 2006.3 - 2008.2

Research Interests

Machine learning, large-scale optimization, statistical learning, robust statistics and applications to deep learning.

Publication

J. Kwon and C. Caramanis, "EM converges for a Mixture of Many Linear Regressions," *Preprint, under Review*, 2019.

J. Kwon, Q. Wei, C. Caramanis, Y. Chen, and D. Davis, "Global Convergence of the EM Algorithm for Mixtures of Two Component Linear Regression," *To appear in the proceedings of the Conference on Learning Theory (COLT)*, 2019.

Research Experience

DICE (Decision, Information, and Communications Engineering), The University of Texas at Austin, TX
Grduate Research Assistant (Prof. Constantine Caramanis) 2018.1 - present

- Analysis on the EM algorithm for a mixture of linear regressions.
- Adversarial Examples: Robustifying DNN classifier to malicious perturbation on test image

PIL (Perceptron and Intelligence Laboratory, Seoul National University
Research Internship (Prof. Jin Young Choi) 2016.7 - 2017.4

- Multi-camera multi-object tracking in computer vision with network-flow formulation
- Group study on various first-order optimization methods.

Design Project for Electrical Engineering, Seoul National University
Course Project: Computer Vision (Prof. Nam Ik Choi) 2014.8 - 2014.12

- Image-dehazing with prior knowledge on the natural scene.

Work Experience

Scientific Analog, Seoul, Korea
R&D Engineer, Program Developer for Mixed Circuit Simulator 2015.5 - 2016. 6

- Develop core module: first-order difference equation (ODE) solver for analog circuit
- Applied model-order reduction technique for faster simulation speed

- Develop scheduler and processor for events in the circuit system in a time order
- Development language: C/C++, Python, Verilog

Redduck, Inc., Seoul. Korea
Programmer, PC Game Client Developer 2011.2 - 2013.12

- Develop FPS game client in PC environment with Unreal 3 Engine
- Development language: C/C++

Teaching Experience

The University of Texas at Austin, Austin, TX
Teaching Assistant, EE 381V, Large Scale Optimization Fall 2018
Teaching Assistant, EE 381V-SE, Introduction to Convex Optimization Spring 2018

Seoul National University, Seoul, Korea
Teaching Assistant, Convex Optimization Fall 2016

Honors and Awards

Graduate Study Scholarship, The Kwanjeong Educational Foundation, 2017 - 2021
- Four-year scholarship for doctorate program.

President Scholarship for Undergraduate, Korea Student Aid Foundation 2008 - 2014
- Four-year scholarship for undergradute program.

International Collegiate Programming Contest, Association for Computing Machinery 2010
- 6th Place in Daejeon Region
- 2nd Place in Hanoi Region

Korea Olympiad in Informatics, Ministry of Science, ICT and Future Planning 2007
- Gold in Area of High School

Korea Physics Olympiad, The Korean Physical Society 2007
- Silver in Area of High School

Other

- Language: Korean (Native), English (Fluent), Japanese (Fluent)
- Specialty: Algorithm/Data Structure, Learning Theory, Optimization
- Computer Skills: C/C++, Python, MATLAB, LaTeX