Haekyu Park

Contact	Data Mining Laboratory, Building 138 #314, Seoul National University 1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea 08826 Email: hkpark627@snu.ac.kr Homepage: `http://haekyu.com`

Research Interests

Data Mining, Graph Data Mining, Machine Learning, Interpretable Machine Learning

Education

B.S., Computer Science and Engineering Mar. 2012 - Aug. 2017
Seoul National University, Seoul, Republic of Korea
Graduated with honors (Cum Laude)

Research and Work Experience

Research Intern June 2016 - Present
Advisor: Prof. U Kang
Data Minig Lab at Seoul National University

Publications

1. Junghwan Kim, Haekyu Park, Ji-eun Lee, and U Kang, **SIDE: Representation Learning in Signed Directed Networks**, The Web Conference (Previously known as WWW, World Wide Web Conference) 2018. (under review)

2. Haekyu Park, Hyunsik Jeon, Junghwan Kim, Beunguk Ahn, and U Kang, **UniWalk: Explainable and Accurate Recommendation for Rating and Network Data**, SIAM International Conference on Data Mining (SDM), 2018. (under review)

3. Haekyu Park, Jinhong Jung, and U Kang, **A Comparative Study of Matrix Factorization and Random Walk with Restart in Recommender Systems**, IEEE International Conference on Big Data (BigData), 2017.

**Projects
2017**

1. **Recommender system on videos of Oksusu application** Present
Keywords: Tensorflow, Sequence Embedding, Approx. k-NN
SK Telecom, Seoul, Republic of Korea

2. **A Fast and Cost Efficient Data Compression Algorithm with Shared Virtual Memory in Heterogeneous System Architecture**
Keywords: OpenCL, GPGPU, SVM, HSA
Undergraduate thesis

2016	1. **Personalized Recommendation on Credit Card Rewards** Keywords: Coupled Matrix Factorization, Time Series Data Hyundai Card, Seoul, Republic of Korea
	2. **Social Recommender System with Graph and Rating Information** Keywords: Matrix Factorization, Network Embedding, Social Network Final project of Probabilistic Graphical Model course

Patents	1. U Kang, Junghwan Kim, and <u>Haekyu Park</u>, Apparatus and Method for Representation Learning in Signed Directed Networks, Korean Patent 10-2017-0130914, 2017.
	2. U Kang, <u>Haekyu Park</u>, Junghwan Kim, and Hyunsik Jeon, Explainable and Accurate Recommender Method and System using Social Network Information and Rating Information, Korean Patent 10-2017-0159167, 2017.

Awards and Honors	**National Scholarship For Science and Engineering** Merit-based	2015

Graduate coursework	Probabilistic Graphical Models @ Seoul National University	Fall 2016

Technical Skills	**Programming Languages** Advanced: Python, Java, C, C++ Experienced: Matlab, Ocaml, Scheme, HTML
	Numerical Computing Advanced: Numpy, SciPy, scikit-learn Experienced: Matlab
	Parallel Computing Experienced: OpenCL

Extracurricular Activities	1. Group study of statistics	Sept. 2017 - Present
	- With a book: "All of Statistics: A Concise Course in Statistical Inference", Larry Wasserman.	
	2. Private tutoring	2012 - Present
	- Programming languages (Python, Java, C, Scheme) for graduate students, undergraduate students, workers in brokerage firms, and a businessman.	
	- Mathematics, Physics, and Chemistry for high school and elementary school students.	
	3. Tutoring	Jan. - Aug. 2015
	- General science for elementary school students. At Jungdae elementary school, Jamshin elementary school, Songjeon elementary school, and Daemyung elementary school in Seoul, Korea.	

- Study habit for elementary school and middle school students.
  At Samsung Digital City in Suwon, Korea.

4. Buddy assistant   Feb. - Aug. 2014

   - In club SNU (Seoul National University) Buddy.

   - Have become a friend with exchange students and helped them adapt to campus life and Korean culture.

   - Organized programs to enjoy together such as welcoming party, temple stay, short trips within Korea, folk games night, and farewell party.