

# HAEKYU PARK

## CONTACT

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## RESEARCH INTERESTS

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

## EDUCATION

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**B.S., Computer Science and Engineering**

Mar. 2012 - Aug. 2017

Seoul National University, Seoul, Republic of Korea, Graduated with honors (Cum Laude)

## WORK EXPERIENCE

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**Research Intern**

June 2016 - Present

Advisor: [Prof. U Kang](#)

[Data Minig Lab](#) at Seoul National University

## PUBLICATIONS

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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

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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** 2017  
Keywords: OpenCL, GPGPU, SVM, HSA  
Undergraduate thesis

3. **Personalized Recommendation on Credit Card Rewards** 2016  
Keywords: Coupled Matrix Factorization, Time Series Data  
Hyundai Card, Seoul, Republic of Korea

4. **Social Recommender System with Graph and Rating Information** 2016  
Keywords: Matrix Factorization, Network Embedding, Social Network  
Final project of Probabilistic Graphical Model course

#### PATENTS

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1. U Kang, Junghwan Kim, and Haekyu Park, Apparatus and Method for Representation Learning in Signed Directed Networks, Korean Patent 10-2017-0130914, 2017.
2. U Kang, Haekyu Park, 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

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

#### GRADUATE COURSEWORK

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Probabilistic Graphical Models @ Seoul National University Fall 2016

#### TECHNICAL SKILLS

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##### **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

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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.