

Sundong Kim

Ph.D. Candidate in Data Mining Lab
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CAREER OBJECTIVES

Research Scientist, Data Scientist

- Seeking an opportunity to participate in a strong team in top-tier companies
- Having strength at communicating with colleagues, facilitating teamwork
- Having strength at understanding things quickly and ability to organize clearly

RESEARCH INTERESTS

- Explaining unknown human behaviors by modeling and analyzing corresponding data (e.g., finding relations between customer revisit and their motion pattern)
- Developing effective algorithms to give benefits to users and clients (e.g., user embedding model for profile prediction, targeted friend recommendation algorithm for SNS)

EDUCATION

KAIST, Daejeon, Republic of Korea

- Ph.D. in Graduate School of Knowledge Service Engineering Mar 2015 – Jun 2019 (Expected)
 - Proposed Thesis: Revisit Prediction Using Customer Mobility Data
 - Adviser: Prof. Jae-Gil Lee
- M.S. in Industrial & Systems Engineering Mar 2013 – Feb 2015
 - Thesis: Maximizing Influence over a Target User through Friend Recommendation
 - Adviser: Prof. Kyoung-Kuk Kim, co-advised by Prof. Jae-Gil Lee
- B.S. in Industrial & Systems Engineering Feb 2008 – Feb 2013
 - Exchange Student in TU Berlin (2012 Spring)
 - Exchange Student in National University of Singapore (2010 Fall)
 - Graduated with *Cum Laude*

WORK EXPERIENCE

Microsoft Research Lab Asia, Beijing, China

- Research Intern in Social Computing Group Sep 2018 – Nov 2018
 - Worked on user embedding model using search queries and browsing data.
 - Our model will be used for improving the performance of various prediction tasks.
 - Research Mentor: Dr. Xing Xie and Dr. Fangzhao Wu

KAIST, Daejeon, Republic of Korea

- Research Assistant in Revisit Prediction Project Feb 2017 – Present
 - Developed revisit prediction model from in-store fingerprinted mobility data
 - Visited two start-up companies ZOYI and Loplat to get data for my research
 - Provided corresponding datasets and offspring projects to master students
 - Advised by Prof. Jae-Gil Lee
- Independent Researcher in Active Friend Recommendation Research May 2014 – Apr 2015
 - Interested in solving asymmetric relationship between people
 - Suggested a new friend recommendation technique with a target user to reduce such a phenomenon
 - Defined two metrics: influence and resistance from SNS and approximated by MCMC
 - Wrote as a master's thesis and presented in ICDE 2015 Ph.D. Symposium
- Research Assistant in Exobrain WiseKB Project Aug 2013 – Feb 2017
 - Developed type and domain inference software for knowledge-base (KB) boosting
 - Fine-grained type of the instance is deduced, when triples are entered into the KB
 - Advised by Prof. Jae-Gil Lee, worked with Prof. Key-Sun Choi and Saltlux
- Undergraduate Summer Intern in Mobile Harbor Project Jun 2010 – Aug 2010
 - Studied queueing theory and discrete event modeling of mobile harbor
 - Advised by Prof. James Morrison

Deloitte Consulting, Seoul, Republic of Korea

- Intern in Technology Integration group Aug 2012 – Nov 2012
 - Helped to renew pricing structure in securities consulting for AhnLab
 - Advised by Youngjin Kang

PUBLICATIONS**INTERNATIONAL CONFERENCES**

- [1] S. Kim and J. Lee, "Utilizing In-Store Sensors for Revisit Prediction," **ICDM 2018 (Full Paper - Acceptance rate: 8.86%)**
Best Paper Candidate, invited to Knowledge and Information Systems.
- [2] S. Kim, "Friend Recommendation with a Target User in Social Networking Services," **ICDE 2015 (Ph.D. Symposium)**

DOMESTIC CONFERENCES (SELECTED)

- [3] M. Choy, M. Kang, M. Kim and S. Kim, "Exploiting Change Patterns of the Past Context Data on Human Interruptibility Prediction," in KCC 2017. (*Best Paper Award*)
- [4] S. Kim and J. Lee, "Predicting Customer's Revisit Intention Using Indoor Movements in Stores by Wi-Fi Monitoring," in KCC 2016.
- [5] S. Kim, M. Kang and J. Lee, "A Method of Automatic Schema Evolution on DBpedia Korea," in KIPS 2014.

UNDER REVIEW / WORKING PAPERS

- [1] "Neural User Embedding based on User Behavior Data," submitted.
- [2] "Joint Learning for Predicting Overall and Aspects Sentiment," submitted.
- [3] "Accelerating the DNN Training via Adaptive Boundary Batch Selection," submitted.
- [4] "Deep Survival Analysis for Revisit Prediction," working paper for dissertation.

LEADERSHIP

- Global TA in iPodia Alliance Mar 2013 – Dec 2017
 - Course name: Principals and practices of global innovation, led by Prof. Stephen Lu in USC
 - Over 500 students from 8 global universities took the class
 - Participated 5 semesters to help interactions between global students, set up the classroom, and graded
 - Managed 2-week travel to USC and 2-week visits of 100+ students
 - Locally worked with Prof. James Morrison and KAIST CELT, globally with many instructors and TAs
- Group Leader in Data Mining Lab, User Modeling Group Jan 2018 – Present
 - Led official lab seminar, practiced 3 min, 15 min presentation with recent publications
 - Helped to make atmosphere with active discussion and managed group members' timeline together
 - Group members: M. Choy, S. Kim (Graduated), M. Kim, H. Kim, Y. Song, Y. Shin
- Top-10 for Kaggle Competition (WSDM 2018 Cup, Churn prediction) Dec 2017
 - Met J. Ryu online, teamed up, and stayed through it, unofficial record due to multiple submissions
 - Generated handcrafted features from the transaction and log data to predict customer's churn behavior
- Mentor for Undergraduates, KAIST Mentoring Program Mar 2013 – Dec 2017
 - Listened to their concerns and helped them go through their school lives well
 - Semester-long program, I spent 15-20 hours/semester with each mentee
 - Mentees: T. Kim (Spring 2013), D. Kim (Spring 2016), Y. Jo (Spring 2017), C. Ryu (Fall 2017)

AWARDS & SCHOLARSHIPS

- Star of Tomorrow Award, Microsoft Research Asia Nov 2018
- Best Presentation Award, Bi-Annual KSE Student Colloquium, KAIST Dec 2017
- National Scholarship for Graduate Studies, Korea Student Aid Foundation 2013 – Present
- Excellent Academic Achievement Scholarship, KAIST IsyE 2009 – 2012
- National Science & Technology Scholarship, Korea Student Aid Foundation 2008 – 2013

LANGUAGES

- Korean: ILR Level 5 – Native
- English: ILR Level 4 – Full Professional Proficiency
- Chinese: ILR Level 1 – Elementary Proficiency

SKILLS & OTHERS

- Efficient problem solver skilled in Python, data mining, deep learning, statistics and \LaTeX
- Innate explorer, having leading and mediating skills
- Proven listener and facilitator
- External Reviewer: ICWSM (2015), IEEE Access, TIST, DKE (2018)

[Last updated on 2018-12-01]