

# SEONGKU KANG

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## EDUCATION

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**POSTECH**, Pohang, South Korea

Mar 2018 - Present

■ Ph.D. in Computer Science and Engineering

- Thesis: Knowledge Distillation Approaches for Accurate and Efficient Recommender System
- Advisor: [Prof. Hwanjo Yu](#)
- Focus: Model compression, Knowledge distillation, Recommender system

**Nanyang Technological University**, Singapore

Jul 2016 - May 2017

■ B.S. in Computer Science and Engineering

- Exchange Student

**Hanyang University**, Seoul, South Korea

Mar 2012 - Feb 2018

■ B.S. in Computer Science and Engineering

- Cumulative GPA: 4.43/4.50 (ranked 1st in CSE Dept.).

## EXPERIENCE

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**Microsoft Research**, Beijing, China

May 2022 - April 2023

■ Research intern in Social Computing group

- Mentor: [Dr. Xing Xie](#), [Dr. Jianxun Lian](#)
- Focus: Information retrieval, Retrieval efficiency, Unbiased learning
- Award of excellence (Stars of Tomorrow, top 10%)

## PUBLICATIONS

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### CONFERENCES

- C15 Distillation from Heterogeneous Models for Top-K Recommendation  
**SeongKu Kang**, Wonbin Kweon, Dongha Lee, Jianxun Lian, Xing Xie, Hwanjo Yu  
ACM The Web Conference (**WWW 2023**)
- C14 Learning Topology-Specific Experts for Molecular Property Prediction  
Suyeon Kim, Dongha Lee, **SeongKu Kang**, Seonghyeon Lee, Hwanjo Yu  
AAAI Conference on Artificial Intelligence (**AAAI 2023**)
- C13 Consensus Learning from Heterogeneous Objectives for One-Class Collaborative Filtering  
**SeongKu Kang**, Dongha Lee, Wonbin Kweon, Junyoung Hwang, Hwanjo Yu  
ACM The Web Conference (**WWW 2022**)
- C12 TaxoCom: Topic Taxonomy Completion with Hierarchical Discovery of Novel Topic Clusters  
Dongha Lee, Jiaming Shen, **SeongKu Kang**, Susik Yoon, Jiawei Han, Hwanjo Yu  
ACM The Web Conference (**WWW 2022**)
- C11 Obtaining Calibrated Probabilities with Personalized Ranking Models  
Wonbin Kweon, **SeongKu Kang**, Hwanjo Yu  
AAAI Conference on Artificial Intelligence (**AAAI 2022, oral presentation**)
- C10 Topology Distillation for Recommender System  
**SeongKu Kang**, Junyoung Hwang, Wonbin Kweon, Hwanjo Yu  
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD 2021**)

- C9 Bootstrapping User and Item Representations for One-Class Collaborative Filtering  
Dongha Lee, **SeongKu Kang**, Hyunjun Ju, Chanyoung Park, Hwanjo Yu  
ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR 2021**)
- C8 Unsupervised Proxy Selection for Session-based Recommender Systems  
Junsu Cho, **SeongKu Kang**, Dongmin Hyun, Hwanjo Yu  
ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR 2021**)
- C7 Learning Heterogeneous Temporal Patterns of User Preference for Timely Recommendation  
Junsu Cho, Dongmin Hyun, **SeongKu Kang**, Hwanjo Yu  
ACM International World-Wide Web Conference (**WWW 2021**)
- C6 Bidirectional Distillation for Top-K Recommender System  
Wonbin Kweon, **SeongKu Kang**, Hwanjo Yu  
ACM International World-Wide Web Conference (**WWW 2021**)
- C5 DE-RRD: A Knowledge Distillation Framework for Recommender System  
**SeongKu Kang**, Junyoung Hwang, Wonbin Kweon, Hwanjo Yu  
ACM International Conference on Information and Knowledge Management (**CIKM 2020**)
- C4 Deep Rating Elicitation for New Users in Collaborative Filtering  
Wonbin Kweon, **SeongKu Kang**, Junyoung Hwang, Hwanjo Yu  
ACM International World-Wide Web Conference (**WWW 2020**)
- C3 Multi-Modal Component Embedding for Fake News Detection  
**SeongKu Kang**, Junyoung Hwang, Hwanjo Yu  
IEEE International Conf. Ubiquitous Information Management and Communication (**IMCOM 2020**)
- C2 Semi-Supervised Learning for Cross-Domain Recommendation to Cold-start Users  
**SeongKu Kang**, Junyoung Hwang, Dongha Lee, Hwanjo Yu  
ACM International Conference on Information and Knowledge Management (**CIKM 2019**)
- C1 Densifying a Trust Network for Effective Collaborative Filtering  
**SeongKu Kang**, Jemin Wang, Yeon-Chang Lee, Sang-Wook Kim  
Korean DataBase Conference (**KDBC 2017**, Best Paper Award)

## JOURNALS

- J3 Mitigating viewpoint sensitivity of self-supervised one-class classifiers  
Hyunjun Ju, Dongha Lee, **SeongKu Kang**, Hwanjo Yu  
**Information Sciences (SCI)** (2022.09)
- J2 Personalized Knowledge Distillation for Recommender System  
**SeongKu Kang**, Dongha Lee, Wonbin Kweon, Hwanjo Yu  
**Knowledge-Based Systems (SCI)** (2022.03)
- J1 Item-side Ranking Regularized Distillation for Recommender System  
**SeongKu Kang**, Junyoung Hwang, Wonbin Kweon, Hwanjo Yu  
**Information Sciences (SCI)** (2021.11)

## AWARDS & SCHOLARSHIPS

**Stars of Tomorrow Award for Outstanding Intern**

Microsoft Research Asia, 2023

**POSTECHIAN Fellowship**

POSTECH, 2022

**POSTECH Research Award (4th place)**

National Research Foundation, Korea, 2022

■ Awarded to outstanding research outcome in POSTECH

<b>Naver Ph.D Fellowship</b>	Naver, 2021
■ Awarded to outstanding Ph.D students majoring in computer science in Korea	
<b>Music Playlist Recommendation Competition (3rd place)</b>	Kakao, 2020
<b>SIGIR Student Travel Award</b>	ACM SIGIR, 2019-2020
<b>Dean's List</b>	Hanyang University, 2018
<b>Best Paper Award (3rd place)</b>	Korean Database Conference (KDBC), 2017
<b>NAVER Academic Scholarship</b>	Naver, 2017
<b>Hanyang Brain Scholarship</b>	Hanyang University, 2012
<b>National Science and Technology Scholarship</b>	Ministry of Education, Korea, 2012-2017