

# Jang-Hyun Kim

blue378@snu.ac.kr  Scholar  GitHub  Homepage

## Education

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### Seoul National University

M.S. & Ph.D. in Computer Science

Aug.2025 (expected)

B.S. in Mathematical Science, *Summa Cum Laude*

Feb.2019

• 2 years mandatory military service

### Seoul Science High School

Feb.2012

## Experience

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### Visiting Scholar, Center for Data Science, New York University

Feb.2024-Aug.2024

• Targeted cause discovery research (Advisor: Kyunghyun Cho)

### Research Intern, NAVER AI Lab

Aug.2018-Jan.2019

• Speech enhancement research ([Demo](#)) (Advisor: Jaejun Yoo)

### Undergraduate Intern, Statistical Multiscale Analysis Lab, Seoul Nat'l University

Dec.2017-Aug.2018

• Riemannian manifold learning (TPAMI21) (Advisor: Hee-Seok Oh)

### Data Anaysis Intern, True Balance, India Mobile App Service

Jan.2017-Apr.2017

• Advertisement analysis using SQL, Spark, Python

## Publications

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• C: conference, J: journal, P: preprint, \*: equal contribution, †: equal supervision

[P3] Targeted Cause Discovery with Data-Driven Learning

**Jang-Hyun Kim**, Claudia Skok Gibbs, Sangdoo Yun, Hyun Oh Song, Kyunghyun Cho  
*arXiv*, 2024

[C6] Compressed Context Memory For Online Language Model Interaction

**Jang-Hyun Kim**, Junyoung Yeom, Sangdoo Yun<sup>†</sup>, Hyun Oh Song<sup>†</sup>  
*ICLR*, 2024

[C5] Neural Relation Graph: A Unified Framework for Identifying Label Noise and Outlier Data

**Jang-Hyun Kim**, Sangdoo Yun, Hyun Oh Song  
*NeurIPS*, 2023

[C4] Dataset Condensation via Efficient Synthetic-Data Parameterization

**Jang-Hyun Kim**, Jinuk Kim, Seong Joon Oh, Sangdoo Yun, Hwanjun Song, Joonhyun Jeong, Jung-Woo Ha, Hyun Oh Song  
*ICML*, 2022

[J2] *spherepc*: An R Package for Dimension Reduction on a Sphere

Jongmin Lee, **Jang-Hyun Kim**, Hee-Seok Oh  
*The R Journal*, 2022

[C3] Uncertainty-Based Offline Reinforcement Learning with Diversified Q-ensemble

Gaon An\*, Seungyong Moon\*, **Jang-Hyun Kim**, Hyun Oh Song  
*NeurIPS*, 2021

[C2] Co-Mixup: Saliency Guided Joint Mixup with Supermodular Diversity

**Jang-Hyun Kim**, Wonho Choo, Hosan Jeong, Hyun Oh Song  
*ICLR* (**Oral**), 2021

- [J1] Spherical Principal Curves  
Jongmin Lee\*, **Jang-Hyun Kim\***, Hee-Seok Oh  
*TPAMI*, 2021
- [C1] Puzzle Mix: Exploiting Saliency and Local Statistics for Optimal Mixup  
**Jang-Hyun Kim**, Wonho Choo, Hyun Oh Song  
*ICML*, 2020
- [P2] Phase-Aware Speech Enhancement with Deep Complex U-Net  
Hyeong-Seok Choi, **Jang-Hyun Kim**, Jaesung Huh, Adrian Kim, Jung-Woo Ha, Kyogu Lee  
*arXiv*, 2019
- [P1] Multi-Domain Processing via Hybrid Denoising Networks for Speech Enhancement  
**Jang-Hyun Kim\***, Jaejun Yoo\*, Sanghyuk Chun, Adrian Kim, Jung-Woo Ha  
*arXiv*, 2018

## Patents

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Image Recognition Method and Apparatus, Image Preprocessing Apparatus, and Method of Training Neural Network  
• **Jang-Hyun Kim**, Hyun Oh Song, Hosan Jeong, Wonho Choo, Seungyong Moon, Gaon An  
Granted US patent, No. 11921818B2, 2024

## Open Sources

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Google’s Speaker Verification ★350+ ([GitHub](#), [Kaggle](#))  
Puzzle Mix ★150+ ([GitHub](#))  
Co-Mixup ★100+ ([GitHub](#))  
Efficient Dataset Condensation ★100+ ([GitHub](#))  
Compressed Context Memory ★50+ ([GitHub](#))  
*spherepc* ([CRAN](#), [Document](#))

## Honors and Awards

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|   |           |
|---|-----------|
| Qualcomm Innovation Fellowship Korea [C2]                                   | 2021      |
| Microsoft Research Asia Fellowship Nomination Award                         | 2021      |
| Youlchon AI Star Scholarship  | 2021      |
| <b>First Prize</b> , Samsung Electronics Excellent Paper Award [C2]         | 2021      |
| Ph.D. Scholarship granted by Korea Foundation for Advanced Studies (KFAS)   | 2020-2024 |
| <b>Honorable Mention</b> , Korean Statistics Society Paper Award [J1]       | 2019      |
| <b>Silver Medal</b> , Korean Contest of Mathematics for University Students | 2017      |
| Presidential Science Scholarship  | 2012-2019 |
| <b>Gold Medal</b> , Korean Mathematical Olympiad (KMO)                      | 2009      |

## Professional Services

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| <b>Reviewing Activity</b> | NeurIPS 2021-, ICLR 2022-, ICML 2023-, TMLR 2023-, JMIR 2024   |
| <b>Program Committee</b>  | NeurIPS Workshop, “Interpolation Regularizers and Beyond”, 2022<br>NeurIPS Workshop, “ImageNet: Past, Present, and Future”, 2021 |

## Talks

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| <b>TUM AI4Science Forum</b> | “Targeted Cause Discovery with Data-Driven Learning”, Dec.2024 (expected)          |
| <b>AI Seoul</b>             | “Compressed Context Memory For Online Language Model Interaction”, Jan.2024        |
| <b>LG Tech Talk</b>         | “A Unified Framework for Identifying Label Noise and Outlier Data”, Aug.2023       |
| <b>Samsung AI Forum</b>     | “Dataset Condensation via Efficient Synthetic-Data Parameterization”, Nov.2022     |
| <b>SNU AI Retreat</b>       | “Co-Mixup: Saliency Guided Joint Mixup with Supermodular Diversity”, Apr.2021      |
| <b>SNU AI Retreat</b>       | “Puzzle Mix: Exploiting Saliency and Local Statistics for Optimal Mixup”, Jul.2020 |

## Teaching

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| <b>SNU, Undergraduate Research Program</b> | Research Mentor, Fall 2021      |
| <b>SNU, Machine Learning</b>               | Teaching Assistant, Fall 2021   |
| <b>SNU, Introduction To Deep Learning</b>  | Teaching Assistant, Spring 2020 |

## References

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| <b>Hyun Oh Song</b>  | Associate Professor, Computer Science and Engineering, SNU (hyunoh@snu.ac.kr)        |
| <b>Sangdoo Yun</b>   | Research Director, Naver AI Lab (sangdoo.yun@navercorp.com)                          |
| <b>Kyunghyun Cho</b> | Professor, Computer Science and Center for Data Science, NYU (kyunghyun.cho@nyu.edu) |