Jang-Hyun Kim

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Education

Seoul National University

M.S. & Ph.D. in Computer Science	Current
B.S. in Mathematical Science, *Summa Cum Laude*	Feb.2019

- 2 years mandatory military service

Seoul Science High School   Feb.2012

Experience

Center for Data Science, NYU   Feb.2024−Aug.2024
- Visiting scholar (Advisor: Prof. Kyunghyun Cho)

NAVER CLOVA   Aug.2018−Jan.2019
- AI global research residency (Advisor: Prof. Jaejun Yoo)
- Research on speech enhancement (Demo)

Statistical Multiscale Analysis Laboratory, SNU   Dec.2017−Aug.2018
- Research internship (Advisor: Prof. Hee-Seok Oh)
- Research on Riemannian manifold learning (TPAMI21)

Deepest, SNU Deep Learning Community   Sep.2017−Aug.2020
- Community manager and project participant
- Caricature generation (GitHub), source separation (Deep Complex U-Net)

True Balance, India Mobile App Service   Jan.2017−Apr.2017
- Data analysis intern
- Working with SQL, Spark, Python

Publications

- C: conference, J: journal, P: preprint, *: equal contribution

[C6] Compressed Context Memory For Online Language Model Interaction
Jang-Hyun Kim, Junyoung Yeom, Sangdoo Yun, Hyun Oh Song
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

[J 2] *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

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 patent, US 11921818B2, 2024

Open Sources

Google's Speaker Verification ★340+ (GitHub, Kaggle)
- TensorFlow implementation of "Generalized End-to-End Loss for Speaker Verification"

Puzzle Mix ★150+ (GitHub)
- PyTorch implementation of "Puzzle Mix: Exploiting Saliency and Local Statistics for Optimal Mixup"

Co-Mixup ★100+ (GitHub)
- PyTorch implementation of "Co-Mixup: Saliency Guided Joint Mixup with Supermodular Diversity"

Efficient Dataset Condensation ★90+ (GitHub)
- PyTorch implementation of "Dataset Condensation via Efficient Synthetic-Data Parameterization"

Compressed Context Memory ★30+ (GitHub)
- PyTorch implementation of "Compressed Context Memory For Online Language Model Interaction"

spherepc (CRAN, Document)
- R package of "Spherical Principal Curve"

Honors and Awards

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

Professional Services

Conference Reviewer	NeurIPS 2021−, ICLR 2022−, ICML 2023−
Program Committee	NeurIPS Workshop, "Interpolation Regularizers and Beyond", 2022
	NeurIPS Workshop, "ImageNet: Past, Present, and Future", 2021

Talks

LG Tech Talk	"A Unified Framework for Identifying Label Noise and Outlier Data", Aug.2023
SNU AI Retreat	"Co-Mixup: Saliency Guided Joint Mixup with Supermodular Diversity", Apr.2021
SNU AI Retreat	"Puzzle Mix: Exploiting Saliency and Local Statistics for Optimal Mixup", Jul.2020

Teaching

SNU, Undergraduate Research Program	Research Mentor, Fall 2021
SNU, Machine Learning	Teaching Assistant, Fall 2021
SNU, Introduction To Deep Learning	Teaching Assistant, Spring 2020

References

Hyun Oh Song	Associate Professor, Dept. of Computer Science and Engineering, SNU (hyunoh@snu.ac.kr)
Hee-Seok Oh	Professor, Dept. of Statistics, SNU (heeseok@stats.snu.ac.kr)