

JINSEONG PARK

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SUMMARY

Affiliation Korea Institute for Advanced Study (KIAS), Seoul, Republic of Korea
AI Fellow (AI Assistant Professor) at the Center for AI and Natural Sciences (CAINS)

Research Topics **Private & Safe Intelligence (PSI, Ψ)**
Investigating theoretical foundations and practical algorithms to ensure the privacy and safety of AI systems. My research extends to industrial applications by designing scalable and robust systems through trustworthy AI.

ACADEMIC POSITION

Mar 2026 - Present AI Fellow (AI Assistant Professor), Korea Institute for Advanced Study ([KIAS](#))
- Center for AI and Natural Sciences ([CAINS](#)), Seoul, Republic of Korea
- Director: [Changbong Hyeon](#), Distinguished Professor: [Daniel Lee](#), [June E Huh](#)

Jun 2025 - Jul 2025 Postdoctoral Fellow, University of British Columbia ([UBC](#))
- Computer Science, Vancouver, British Columbia, Canada
- Host: [Mi Jung Park](#)

Mar 2025 - Feb 2026 AI Research Fellow, Korea Institute for Advanced Study ([KIAS](#))
- Center for AI and Natural Sciences ([CAINS](#)), Seoul, Republic of Korea
- Mentor: [Jeong Han Kim](#)

EDUCATION

Mar 2022 - Feb 2025 Ph.D. in Industrial Engineering ([IE](#)), Seoul National University ([SNU](#))
- [[Thesis](#)] Generalization Frameworks for Temporal and Private Deep Learning: From Synthetic Data Generation to Robust Optimization
- Supervisor: [Jaewook Lee](#)
- Cumulative Major GPA: 3.94/4.30

Mar 2020 - Feb 2022 Master of Science in Industrial Engineering ([IE](#)), Seoul National University ([SNU](#))
- [Thesis] Differentially Private Multi-class Classification Using Kernel Supports and Equilibrium Points
- Supervisor: [Jaewook Lee](#)
- Cumulative Major GPA: 4.19/4.30

Mar 2019 - Aug 2019 Student Exchange Program, Technische Universität Graz ([TU Graz](#))
- Bachelor's program in Mechanical Engineering, Graz, Austria

Mar 2016 - Feb 2020 Bachelor of Science in Industrial and Management Engineering ([IME](#)), Pohang University of Science and Technology ([POSTECH](#))
- Graduated with Honors: Summa Cum Laude (rank: 1/22)
- Cumulative GPA: 3.91/4.30, Cumulative Major GPA: 4.03/4.30

Mar 2013 - Feb 2016 Hana Academy Seoul ([Hana High School](#))

PUBLICATIONS

Full list available on [Google Scholar](#). (†: equal contribution. *: corresponding author.)

J: JOURNALS

- [7] Hoki Kim, **Jinseong Park**, Woojin Lee, Jaewook Lee, Yujin Choi, “Exploring the Effect of Multi-step Ascent in Sharpness-Aware Minimization”. In: *IEEE Access* (2026), pp. 1–1.
- [6] Yujin Choi, **Jinseong Park**, Youngjoo Park, Jaewook Lee, Junyoung Byun, “Differentially private up-sampling for enhanced anomaly detection in imbalanced data”. In: *Engineering Applications of Artificial Intelligence* (2026), p. 113124.
- [5] **Jinseong Park**, Hyungjin Ko, Jaewook Lee, “Modeling Asset Price Process: An Approach for Imaging Price Chart with Generative Diffusion Models”. In: *Computational Economics* (2024), pp. 1–27.
- [4] **Jinseong Park**, Hoki Kim, Yujin Choi, Woojin Lee, Jaewook Lee, “Fast sharpness-aware training for periodic time series classification and forecasting”. In: *Applied Soft Computing* (2023), p. 110467.
- [3] Hoki Kim, **Jinseong Park**, Jaewook Lee, “Generating Transferable Adversarial Examples for Speech Classification”. In: *Pattern Recognition* 137 (2023), p. 109286.
- [2] **Jinseong Park**, Yujin Choi, Junyoung Byun, Jaewook Lee, Saerom Park, “Efficient differentially private kernel support vector classifier for multi-class classification”. In: *Information Sciences* 619 (2023), pp. 889–907.
- [1] Yujin Choi, **Jinseong Park**, Jaewook Lee, Hoki Kim, “Exploring Diverse Feature Extractions for Adversarial Audio Detection”. In: *IEEE Access* 11 (2023), pp. 2351–2360.

C: CONFERENCES

- [12] **Jinseong Park**[†], Seungyun Lee[†], Woojin Jeong, Yujin Choi, Jaewook Lee, “TimeBridge: Better Diffusion Prior Design with Bridge Models for Time Series Generation”. In: *SIGKDD Conference on Knowledge Discovery and Data Mining* (2026).
- [11] Hoki Kim, **Jinseong Park**, Yujin Choi, Jaewook Lee, “Stability Analysis of Sharpness-Aware Minimization”. In: *International Conference on Machine Learning* (2026).
- [10] Miso Kim, Georu Lee, Yunji Kim, Hoki Kim*, **Jinseong Park***, Woojin Lee*, “Co-occurring Associated REtained concepts in Diffusion Unlearning”. In: *The Fourteenth International Conference on Learning Representations* (2026).
- [9] **Jinseong Park**, Yujin Choi, Jaewook Lee, “Multi-Class Support Vector Machine with Differential Privacy”. In: *Advances in Neural Information Processing Systems* (2025).
- [8] Yujin Choi, Youngjoo Park, Junyoung Byun, Jaewook Lee, **Jinseong Park***, “Safeguarding Privacy of Retrieval Data against Membership Inference Attacks: Is This Query Too Close to Home?” In: *Conference on Empirical Methods in Natural Language Processing (EMNLP) Findings* (2025).
- [7] Dongbin Kim, **Jinseong Park**, Jaewook Lee, Hoki Kim, “Are Self-Attentions Effective for Time Series Forecasting?” In: *Advances in Neural Information Processing Systems* (2024).
- [6] **Jinseong Park**[†], Yujin Choi[†], Jaewook Lee, “In-distribution Public Data Synthesis with Diffusion Models for Differentially Private Image Classification”. In: *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition* (2024).
- [5] Yujin Choi[†], **Jinseong Park**[†], Hoki Kim, Jaewook Lee, Saerom Park, “Fair Sampling in Diffusion Models through Switching Mechanism”. In: *Proceedings of the AAAI Conference on Artificial Intelligence* (2024).

- [4] Hoki Kim, **Jinseong Park**, Yujin Choi, Jaewook Lee, “Fantastic Robustness Measures: The Secrets of Robust Generalization”. In: *Advances in Neural Information Processing Systems* (2023).
- [3] **Jinseong Park**, Hoki Kim, Yujin Choi, Jaewook Lee, “Differentially Private Sharpness-Aware Training”. In: *International Conference on Machine Learning* (2023).
- [2] Sungyoon Lee, **Jinseong Park**, Jaewook Lee, “Implicit Jacobian regularization weighted with impurity of probability output”. In: *International Conference on Machine Learning* (2023).
- [1] Sungyoon Lee, Woojin Lee, **Jinseong Park**, Jaewook Lee, “Towards Better Understanding of Training Certifiably Robust Models against Adversarial Examples”. In: *Advances in Neural Information Processing Systems* 34 (2021).

W: WORKSHOPS

- [1] Seungju Lee, **Jinseong Park**, Jaewook Lee, “Enhancing non-linear asset volatility forecasting models with investor sentiment and explainable AI”. In: *Korea Computer Congress (KCC) 2023, XAI workshop, Best paper awards (2/37)* (2023).

P: PREPRINTS

- [10] **Jinseong Park**, Mijung Park, “Not Every Time and Frequency Need to Be Forgotten in Diffusion Unlearning”. In: (2026). Under review, NeurIPS 2026.
- [9] Seungyun Lee, Jaewook Lee, **Jinseong Park***, “Time Series Constrained Sampling via Refining Trajectory-Level Control”. In: (2026). Under review, NeurIPS 2026.
- [8] Georu Lee, Seungwon Jeong, Hoki Kim*, **Jinseong Park***, Woojin Lee*, “Machine Unlearning for Masked Diffusion Language Models”. In: (2026). Under review, NeurIPS 2026.
- [7] Changsu Shin, **Jinseong Park***, Sungyoon Lee*, “Memorization Detection in Diffusion Models via Text Embedding Interpolation”. In: (2026). Under review, NeurIPS 2026.
- [6] Hyundo Choi, Junhyeong An, **Jinseong Park***, Jaewoong Choi*, “Unlearning for One-Step Generative Models via Unbalanced Optimal Transport”. In: (2026). Under review, ECCV 2026.
- [5] **Jinseong Park**, Yujin Choi, Youngjoo Park, Jaewook Lee, “Privacy-Preserving Asymmetric Banach Kernel Encoding for Support Vector Classification”. In: (2025). Under review, Pattern Recognition.
- [4] **Jinseong Park**, Jaewook Lee, Hyungjin Ko, “Advanced Market-Adaptive Portfolio Insurance: Dynamic Regime Detection Approach”. In: *Available at SSRN 4779183* (2024). Resubmission, Economic Modelling.
- [3] Yujin Choi, **Jinseong Park**, Youngjoo Park, Jaewook Lee, “Multiple Hyperplanes with Dual Encoding Support Vector Machine for Industrial Anomaly Detection”. In: (2025). Under review, IEEE Transactions on Industrial Informatics.
- [2] Yujin Choi, **Jinseong Park**, Junyoung Byun, Jaewook Lee, “Leveraging Programmatically Generated Synthetic Data for Differentially Private Diffusion Training”. In: (2024). Under review, Pattern Recognition.
- [1] Hoki Kim, **Jinseong Park**, Yujin Choi, Seungyun Lee, Jaewook Lee, “BayesNAM: Leveraging Inconsistency for Reliable Explanations”. In: *arXiv preprint arXiv:2411.06367* (2024). Under review, Pattern Recognition.

PATENTS

- [4] **10-2025-0143602, Patent Application, Korea** Oct 2025
- 시계열 예측 인공지능 모델 학습 방법 및 장치, 이를 이용한 시계열 예측 방법 및 장치 (METHOD AND APPARATUS FOR TRAINING ARTIFICIAL INTELLIGENCE MODEL FOR TIME SERIES FORECASTING, METHOD AND APPARATUS FOR TIME SERIES FORECASTING USING THE SAME)
- [3] **10-2023-0087024, Patent Application, Korea** Jun 2023
- 적대적 음성 예제를 감지 방법 및 시스템 (METHOD AND SYSTEM FOR DETECTING ADVERSARIAL SPEECH EXAMPLE)
- [2] **10-2023-0087006, Patent Application, Korea** Jul 2023
- 적대적 음성 예제 생성 방법 및 시스템 (METHOD AND SYSTEM FOR GENERATING ADVERSARIAL SPEECH EXAMPLE)
- [1] **10-2023-0073178, Patent Application, Korea** Jul 2023
- 커널 서포트 벡터에 기반한 차분 프라이버시 다중 분류 학습을 위한 장치 및 방법 (Apparatus and Method for Learning Differential Privacy Multi-Classification Based on Kernel Support Vector)

INVITED TALKS

Machine Unlearning in Generative AI

- (Scheduled) International Conference for the 80th Anniversary of the Korean Mathematical Society (KMS), Seoul, Korea Jun 23, 2026

Data Privacy in (Generative) AI

- Artificial Intelligence Graduate School, UNIST, Ulsan, Korea Mar 18, 2026
- School of Cybersecurity (PQSnC Lab Seminar), Korea University, Seoul, Korea Feb 23, 2026
- KIAS Center for AI and Natural Sciences Winter Workshop, Goseong, Korea [\[link\]](#) Jan 05, 2026
- National Institute for Mathematical Sciences (NIMS), Seongnam, Korea [\[link\]](#) Nov 26, 2025
- Department of Computer Science, Hanyang University, Seoul, Korea [\[link\]](#) Nov 12, 2025

Trustworthy Generative AI

- KIAS Center for AI and Natural Sciences Workshop, Jeongseon, Korea May 30, 2025
- Korean Society for Industrial and Applied Mathematics (KSIAM), Seoul, Korea May 17, 2025

Privacy-Preserving Deep Learning

- Department of Computer Science (Park Lab ML Seminar), UBC, Vancouver, Canada Jul 23, 2025
- Department of Industrial Engineering, UNIST, Ulsan, Korea Jun 11, 2025
- KIAS School of Computational Sciences Workshop, Gangneung, Korea May 22, 2025
- KIAS Center for AI and Natural Sciences Seminar, Seoul, Korea Mar 23, 2025
- PET(Privacy-Enhancing Technologies) MEETUP, Desilo, Seoul, Korea [\[link\]](#) Jul 2024

TEACHING EXPERIENCES

Lecturer, Soongsil University

Fall 2024

- Analysis of Financial Time Series (금융시계열분석) (2024-2, 2150052601, 3 credits), Seoul, Korea
- Teaching evaluation score: **96.4/100.0** (average: 88.3/100.0)

Teaching Assistant (TA), Industrial Engineering (Prof. Jaewook Lee), SNU

2020 - 2023

- Undergraduate courses: Statistics for Industrial Engineering (Spring 2020, Spring 2022, and Spring 2023), Mathematical Methods for Industrial and Management Engineering (Fall 2020)
- Graduate courses: Data Mining Technology (Fall 2022), Advanced Topics in Statistical Learning (Spring 2023)

TA & Instructor, Corporate Education Programs, SNU

2020 - 2023

- Instructor for big data analysis with Python and deep learning with PyTorch in Woori Bank (2022)
- Instructor for AI practice course in Korea Institute of Startup & Entrepreneurship Development (KISED) (2022)
- TA for Machine Learning and Deep Learning for Prof. Jaewook Lee in SNU Big-Data FinTech course (2021 and 2023)
- TA for Python programming for Prof. Namhyung Kim in SNU Big-Data FinTech course (2022)
- TA for Optimization and Linear Algebra for Prof. Jaewook Lee in Samsung Data Scientist for Device Solution (2020-2022) and Industrial Bank of Korea (2020 and 2021)

ACADEMIC EXPERIENCES

Academic Projects

- (PI) Development of Generative Models for Safe and Trustworthy AI (안전하고 신뢰가능한 인공지능을 위한 생성 모델 개발), Korea Institute of Advanced Study (KIAS), Ministry of Science and ICT Mar, 2025 - Present

Workshop Organizer

- KIAS Center for AI and Natural Sciences Winter Workshop, Goseong, Korea [\[link\]](#) Jan 05-08, 2026

Tutorial Lecture

- The 17th KIAS CAC Summer School on Artificial Intelligence & Parallel Computing, Seoul, Korea [\[link\]](#) Jun 22-26, 2026

KIAS CAINS Seminar Hosts

- Seong Joon Oh (KAIST AI), Deploying general AI in the private world [\[link\]](#) May 06, 2026
- Mingyu Kim (Kookmin University), Safety-Guided Flow (SGF): A Unified Framework for Negative Guidance in Safe Generation [\[link\]](#) Apr 17, 2026
- Sangwoong Yoon (UNIST), Generative Modeling and Reinforcement Learning: Energy, Reward, and Value [\[link\]](#) Apr 09, 2026
- Jaewook Lee (Seoul National University), Stability Analysis Toward Safe Physical AI [\[link\]](#) Mar 20, 2026
- Taehyun Hwang (Seoul National University), Contextual Combinatorial Bandits with Nonlinear Function approximation [\[link\]](#) Mar 04, 2026
- Kyungwoo Song (Yonsei University), Statistical Methods for Improving LLM Performance [\[link\]](#) Feb 20, 2026
- Albert No (Yonsei University), What Does It Mean for an LLM to Forget? Recent Progress in Machine Unlearning [\[link\]](#) Feb 11, 2026
- Byeonghu Na (KAIST), Post-training Alignment for Probabilistic Generative Models [\[link\]](#) Jan 14, 2026
- Jaemoo Choi (Georgia Tech), Efficient and Scalable Diffusion Sampling from an Optimal Transport Perspective [\[link\]](#) Jan 12, 2026
- Hoki Kim (Chung-Ang University), Stability analysis of sharpness-aware minimization [\[link\]](#) Sep 24, 2025
- Jongheon Jeong (Korea University), Safety Issues in Generative AI at Scale [\[link\]](#) Sep 11, 2025
- Lai, Chieh-Hsin (Sony AI), Taming Diffusion Models: Controllable Generation and Fast Sampling [\[link\]](#) Sep 03, 2025

Academic Reviewers

- Journal: Pattern recognition, IEEE Internet of Things, TKDE
- Conference: CVPR, NeurIPS, ICML, ICLR, AAAI, KDD

Attendee, Algorithmic Fairness in Graduate Summer School, LA, USA Jul 2022

- Lectured by Cynthia Dwork et al., Institute for Pure & Applied Mathematics (IPAM) at UCLA

Lab Research Intern, IDEA Lab, Pohang, Korea Sep 2019 - Dec 2019

- Industrial Data Engineering & Analytics Lab, hosted by Prof. Hyunbo Cho at POSTECH

INDUSTRIAL EXPERIENCES

[Project] COSMAX, Seoul, Korea Dec 2023 - Feb 2024, Jun 2024 - Sep 2024

- Lead Researcher, Prediction and Generative Neural Networks for Color Cosmetics

[Intern] SK Telecom, Seoul, Korea Jun 2018 - Aug 2018

- R&D Digital Transformation Team Intern
- Developed services for R&D Digital Transformation of internal data clusters

[Project] LNG industry, POSCO Energy, Pohang, Korea 2018

- Student Researcher, with Prof. Ribin Seo at POSTECH
- Organized LNG value chains and strategic implications of POSCO Energy

SCHOLARSHIP

2023	The 15th Lee Joong Han Award (Research), Industrial Engineering, SNU.
2022 - 2023	Teaching Assistant scholarship, SNU, Full tuition for all semesters.
2021 Fall	Scholarship for Academic Excellence, SNU, Merit-based, 30% of tuition for a semester.
2019 Spring	Scholarship for Exchange Students, POSTECH.
2018 Fall, 2019 Fall	Mentor Scholarship for IME Information System Tech, C++ programming, POSTECH.
2018 - 2019	National Scholarship for Science and Engineering, Republic of Korea, Merit-based, full tuition for all semesters.
2016 - 2017	Scholarship for Academic Excellence, POSTECH, Merit-based, full tuition for all semesters.

REFERENCES

Jaewook Lee	Professor of Industrial Engineering, Seoul National University 1 Gwanak-ro, Gwanak-gu, Seoul, KR ✉ jaewook@snu.ac.kr 🌐 https://safeai.snu.ac.kr
Saerom Park	Assistant professor of Industrial Engineering, UNIST 50, UNIST-gil, Eonyang-eup, Ulju-gun, Ulsan, KR ✉ srompark@unist.ac.kr 🌐 https://sites.google.com/view/safe-ai-lab
Sungyoon Lee	Assistant professor of Computer Science, Hanyang University IT/BT Building, Wangsimni-ro 222, Seongdong-gu, Seoul, KR ✉ sungyoonlee@hanyang.ac.kr 🌐 https://sites.google.com/view/sungyoon-lee