Chanhyuk Lee

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Research Interests

I am interested in developing new methods for generative intelligence beyond autoregressive modeling. My current research focuses on modeling discrete data with continuous diffusion and flow models, with an emphasis on efficient language generation and reasoning in continuous latent spaces. My broader interests include exploring neural network parameter spaces, particularly for model merging to build generalist models and for weight-space memories.

Education

Korea Advanced Institute of Science & Technology (KAIST) — Daejeon, Korea
M.S. Computer Science — *Mar. 2025 – Feb. 2027 (Expected)*
- Advisor: Seunghoon Hong

Korea Advanced Institute of Science & Technology (KAIST) — Daejeon, Korea
B.S. Computer Science and Chemistry (Double Major), Cum Laude — *Mar. 2019 – Feb. 2025*

Publications

** equal contribution, † equal advising*

First-Authored

1. **Asynchronous Flow Map Language Models**
   Chanhyuk Lee, Wonjung Kim, Patrick Pynadath, Jaehoon Yoo, Satoshi Hayakawa, Ruqi Zhang, Jinwoo Kim†, Seunghoon Hong†
   arXiv preprint, 2026 [arXiv] [code]
2. **Large Flow Language Models**
   Arnav Chavan*, **Chanhyuk Lee***, Udbhav Bamba*, Jaehoon Yoo, Seunghoon Hong, Aditi Raghunathan, Jinwoo Kim
   arXiv preprint, 2026 [arXiv] [code]
3. **Flow Map Language Models: One-step Language Modeling via Continuous Denoising**
   Chanhyuk Lee, Jaehoon Yoo, Manan Agarwal, Sheel Shah, Jerry Huang, Aditi Raghunathan, Seunghoon Hong, Nicholas M. Boffi†, Jinwoo Kim†
   NeurIPS 2026; COLM 2026 NonAR-LM Workshop Spotlight [arXiv] [code] [project]
4. **AdaRank: Adaptive Rank Pruning for Enhanced Model Merging**
   Chanhyuk Lee, Jiho Choi, Chanryeol Lee, Donggyun Kim, Seunghoon Hong
   ICLR 2026 [arXiv] [code]

Co-Authored

5. **A Survey on Continuous Diffusion and Flow Language Models**
   Sophia Tang, **Chanhyuk Lee**, Floor Eijkelboom, Jinwoo Kim
   Preprint, 2026 [paper]
6. **Thinking with Looped Flows**
   Ayhan Suleymanzade, **Chanhyuk Lee**, Floor Eijkelboom, Nicholas M. Boffi, İsmail İlkan Ceylan†, Jinwoo Kim†
   arXiv preprint, 2026 [arXiv] [code]
7. **One-Step Generation via Riemannian Wasserstein Gradient Flows**
   David Li, **Chanhyuk Lee**, Jaehoon Yoo, Nikita Gushchin, Floor Eijkelboom, Eric Moulines, Maxim Panov, Alexander Korotin, Seunghoon Hong, Jinwoo Kim
   NeurIPS 2026 DiffuLM Workshop [arXiv]
8. **PatchKV: Weight-Space Compensation of KV Cache**
   Chanryeol Lee, **Chanhyuk Lee**, Yeonwoo Choi, Donggyun Kim†, Seunghoon Hong†
   NeurIPS 2026 [arXiv] [code]
9. **Self-conditioned Flow Map Language Models via Fixed-point Flows**
   Jaehoon Yoo, Wonjung Kim, Floor Eijkelboom, **Chanhyuk Lee**, Nicholas M. Boffi, Seunghoon Hong†, Jinwoo Kim†
   COLM 2026 NonAR-LM Workshop Oral [arXiv] [code]
10. **Posterior Refinement: Fast Language Generation via Any-Order Flow Maps**
    Manan Agarwal*, Sheel Shah*, **Chanhyuk Lee**, Jaehoon Yoo, Jerry Huang, Seunghoon Hong, Aditi Raghunathan, Jinwoo Kim†, Nicholas M. Boffi†
    COLM 2026 NonAR-LM Workshop Spotlight [arXiv] [code] [project]
11. **Infinite Mask Diffusion for Few-Step Distillation**
    Jaehoon Yoo, Wonjung Kim, **Chanhyuk Lee**, Seunghoon Hong
    ICML 2026 [arXiv] [code] [project]

12. **Universal Few-Shot Spatial Control for Diffusion Models**
Kiet T. Nguyen, **Chanhyuk Lee**, Donggyun Kim, Donghoon Lee, Seunghoon Hong
NeurIPS 2025 [arXiv] [code]

13. **Revisiting Weight Averaging for Model Merging**
Jiho Choi*, Donggyun Kim*, **Chanhyuk Lee**, Seunghoon Hong
arXiv preprint, 2024 [arXiv] [code]

Experience

Vision and Learning Lab, KAIST Daejeon, Korea
Undergraduate Research Intern *Jul. 2024 – Feb. 2025*

- Advisor: Seunghoon Hong
- Research on building multi-task generalist models through model merging and parameter-space symmetry.

CVML Lab, KAIST AI Seoul, Korea
Undergraduate Research Intern *Jan. 2024 – Jun. 2024*

- Advisor: Hyunjung Shim
- Research on classification bias in post-training quantization of vision transformers.

Republic of Korea Army Korea
Military Service *Jan. 2022 – Jul. 2023*

M-Design Lab, KAIST Chemistry Daejeon, Korea
Undergraduate Researcher *Jan. 2020 – Jun. 2021*

- Advisor: Hyungjun Kim
- Research on proton transfer in acid–base reactions using density functional theory (DFT) simulations

Academic Service

- Conference Reviewer: NeurIPS (2026–), ICLR (2026–), ICML (2026–)
- Workshop Reviewer: COLM 2026 NonAR-LM

Invited Talks

Flow Map Language Models: One-step Language Modeling via Continuous Denoising

- KAIST-Mila Prefrontal AI Workshop (host: Sungsoo Ahn, Sungjin Ahn, Seunghoon Hong)
- NVIDIA (host: Boris Ginsburg)
- Discrete Diffusion Reading Group (host: Subham Sahoo, Zhihan Yang, Justin Deschenaux)

Teaching & Mentoring

Teaching Assistant, KAIST School of Computing

- Introduction to Deep Learning (CS371) *Fall 2025*
- Elements of AI (CS103) *Spring 2025*

Teaching Assistant, Samsung Electronics

- Samsung Research AI Expert Program *2025 – 2026*

Honors

- KAIST School of Computing Best TA Award *2025*
- Samsung Humantech Paper Awards (High School Track) *2018*

Skills

- Programming Languages: Python, C/C++
- Languages: Korean (Native), English (Fluent, TOEFL iBT: 110)

References

Seunghoon Hong, Associate Professor, KAIST
seunghoon.hong@kaist.ac.kr M.S. advisor

Nicholas M. Boffi, Assistant Professor, Carnegie Mellon University
nboffi@andrew.cmu.edu Research advisor and collaborator

İsmail İlkan Ceylan, Associate Professor, TU Wien
ismail.ceylan@tuwien.ac.at Research advisor and collaborator