

Sejin Kim

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EDUCATION

Mar. 2017 ~ Feb. 2023	Korea Advanced Institute of Science and Technology School of Computing	Daejeon, Korea
	Thesis: Region-Level Spatio-Temporal Prediction Based on Transfer Learning for Data-Poor Cities <i>Advisor: Jae-Gil Lee</i> <i>Ph.D. in Computer Science</i>	
Sep. 2013 ~ Aug. 2016	Korea Advanced Institute of Science and Technology School of Computing	Daejeon, Korea
	Thesis: Design and implementation of cost-based query optimization for Odysseus/OOSQL <i>Advisor: Kyu-Young Whang</i> <i>M.S. in Computer Science</i>	
Mar. 2009 ~ Aug. 2013	Korea Advanced Institute of Science and Technology School of Computing	Daejeon, Korea
	<i>B.S. in Computer Science</i>	

RESEARCH EXPERIENCES

- Postdoctoral Researcher at AI Graduate School, Gwangju Institute of Science and Technology, Korea (Apr. 2023 ~ Present)
- Researcher at GraphAI Research, GraphAI Co. Ltd., Korea (Feb. 2023 ~ Mar. 2023)
- Researcher at Advanced Information Technology Research Center, Korea Institute of Science and Technology, Korea (Sep. 2016 ~ Feb. 2017)

RESEARCH INTERESTS

- Strong AI
- Artificial general intelligence
- Human-like AI
- Meta-learning
- Reinforcement learning

PUBLICATIONS (SCIE/ESCI)

1. Lee, S.^{*}, Sim, W.^{*}, Shin, D., Hwang, S., Seo, W., Park, J., Lee, S., **Kim, S.** & Kim, S.[†], (2024), "Reasoning Abilities of Large Language Models: In-Depth Analysis on the Abstraction and Reasoning Corpus", ACM TIST (*under review*).

CONFERENCES

1. Shim, S.^{*}, Ko, D.^{*}, Lee, H., Lee, S., Song, D., Hwang, S., **Kim, S.**, Kim, S.[†], (2024), "O2ARC 3.0: A Platform for Solving and Creating ARC Tasks", IJCAI Demo.
2. Lee, H.^{*}, **Kim, S.**^{*}, Lee, S., Hwang, S., Lee, J., Lee, B.[†], Kim, S.[†], (2024), "ARCLE: The Abstract and Reasoning Corpus Learning Environment for Reinforcement Learning", CoLLAs.
3. Park, J.^{*}, Im, J.^{*}, Hwang, S.^{*}, Lim, M.^{*}, Ualibekova, S., **Kim, S.**, Kim, S.[†], (2023), "Unraveling the ARC Puzzle: Mimicking Human Solutions with Object-Centric Decision Transformer", ICML ILHF Workshop.
4. Kim, S., Song, H., **Kim, S.**, Lee, J.-G.[†], (2020), "Revisit Prediction by Deep Survival Analysis", PAKDD.
5. Yea, S.-G., **Kim, S.**, TO, J.-M., Lee, J.-G.[†], (2016), "SentiWorld: Understanding Emotions between Countries Based on Tweets", ICWSM Demo.

PUBLICATIONS (DOMESTIC)

1. Sim, W., Jin, H., **Kim, S.**, Kim, S.[†], (2024), "The Possibility of Prompt Engineering for ARC Problem Solving", KIISE Transactions on Computing Practices.

CONFERENCES (DOMESTIC)

1. Lee, J., Lee, S., **Kim, S.**[†], Kim, S.[†], (2023), "Extracting the Core Knowledge of ARC with the World Model", Korea Software Congress.
2. Gu, G., Sim, W., Im, J., **Kim, S.**, Kim, S.[†], (2023), "Using Contrastive Learning for Abstraction and Reasoning Task", Korea Software Congress.
3. Lee, H., **Kim, S.**, Kim, S.[†], (2023), "ARCLE: Gymnasium Environment for Abstraction and Reasoning Corpus", Korea Software Congress.
4. Park, J., Im, J., Lee, Y., Shin, D., **Kim, S.**, Kim, S.[†], (2023), "Abstraction and Reasoning Challenge with Decision Transformer", Korea Computer Congress.
5. Sim, W., Jin, H., **Kim, S.**, Kim, S., (2023), "The Possibility of Prompt Engineering for ARC Problem Solving", Korea Computer Congress.
6. Shin, Y., Park, D., Kang, J., **Kim, S.**[†], (2022), "Contrastive Learning with Segment Supervision for Semi-Supervised Time Series Classification", Korea Software Congress.
7. Kim, B., Na, J., Byun, Y., **Kim, S.**, Lee, J.-G.[†], (2022), "Autoencoder ODEs for Time Series Anomaly Detection", Korea Software Congress.
8. Kim, J., Kim, D., **Kim, S.**, Kang, J., Park, D., Lee, J.-G.[†], (2022), "Performance Comparison of Self-Driving Models With and Without LIDAR Sensors Based on Reinforcement Learning in AWS DeepRacer Platform ", Korea Computer Congress.
9. Trirat, P., Shin, Y., **Kim, S.**[†], Kim, M.[†], (2021), "Generating a Machine Learning Model with a Few Sentences", Korea Software Congress.
10. Kim, B., Kim, S., **Kim, S.**, Lee, J.-G.[†], (2019), "Customer Revisit Prediction Using Macroscale Mobility Information", Korea Software Congress.
11. **Kim, S.**[†], (2018), "A Comparison of Implementation Method of Spatial Operator in Spatial OLAP ",

PATENTS

1. Lee, J.-G., Lee, C., Kim, J., **Kim, S.**, "Retrieval System for Geosocial Networks and Method of the Same", KR-Registration No. 10-2055900-0000