Suyoung Lee

Contact Information

Korea Advanced Institute of Science and Technology (KAIST), School of Electrical Engineering.
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Research Interests

Deep reinforcement learning, especially meta-reinforcement learning and generalization.

Education

Ph.D. Candidate, Electrical Engineering *Aug. 2022 to Feb. 2024 (expected)*
Korea Advanced Institute of Science and Technology (KAIST).
Advisor: Prof. Youngchul Sung.

Ph.D. Candidate, Electrical Engineering *Mar. 2019 to Aug. 2022*
Korea Advanced Institute of Science and Technology (KAIST).
Advisor: Prof. Sae-Young Chung.

M.S., Electrical Engineering *Mar. 2017 to Feb. 2019*
Korea Advanced Institute of Science and Technology (KAIST).
Advisor: Prof. Sae-Young Chung.

B.S., Electrical Engineering *Feb. 2012 to Feb. 2017*
Korea Advanced Institute of Science and Technology (KAIST).

Hansung Science High School, Seoul, Republic of Korea. *Feb. 2012*

Honors

Best Ph.D. Dissertation Award. *2024*
Thesis: *Meta-Reinforcement Learning with Imaginary Tasks*, KAIST EE.

Qualcomm-KAIST Innovation Awards. *2018*
Paper competition awards for graduate students, Qualcomm.

Un Chong-Kwan Scholarship Award. *2017*
For achievement of excellence in 2017 entrance examination, KAIST EE.

Publications

[C] Conference [W] Workshop [P] Preprint

[C1] **Suyoung Lee**, Sungik Choi, and Sae-Young Chung. "*Sample-Efficient Deep Reinforcement Learning via Episodic Backward Update*." Neural Information Processing Systems (NeurIPS) 2019.

[C2] **Suyoung Lee** and Sae-Young Chung. "*Improving Generalization in Meta-RL with Imaginary Tasks from Latent Dynamics Mixture*." Neural Information Processing Systems (NeurIPS) 2021.

[C3] **Suyoung Lee**, Myungsik Cho, and Youngchul Sung. "*Parameterizing Non-Parametric Meta-Reinforcement Learning Tasks via Subtask Decomposition*." Neural Information Processing Systems (NeurIPS) 2023.

[C4] Jeonghyee Kim, **Suyoung Lee**, Woojun Kim, and Youngchul Sung "*Decision ConvFormer: Local Filtering in Metaformer is Sufficient for Decision Making*." International Conference on Learning Representations (ICLR) 2024 as **spotlight presentation (366/7262= 5.0%)**.

[W1] **Suyoung Lee** and Sae-Young Chung. "*Adaptive Intrinsic Motivation with Decision Awareness*." Decision Awareness in Reinforcement Learning Workshop at International Conference on Machine Learning (ICML) 2022.

[W2] Jeonghye Kim, **Suyoung Lee**, Woojun Kim, and Youngchul Sung. "*Decision ConvFormer: Local Filtering in MetaFormer is Sufficient for Decision Making.*" Foundation Models for Decision Making Workshop at Neural Information Processing Systems (NeurIPS) 2023.

Languages

Korean (native)
English (fluent) – TOEIC 950 (23.06.28)
Russian (basic)
International linguistic experience at Tashkent International School, 2007–2009.

Programming Languages

MATLAB and Python (PyTorch/TensorFlow).
GitHub: https://github.com/suyoung-lee

Academic Services

Conference reviewer

- International Conference on Machine Learning (ICML): 2021–2023
- Neural Information Processing Systems (NeurIPS): 2021–2023
- Internation Conference on Learning Representations (ICLR): 2024

Program committee

- Foundation Models for Decision Making Workshop (FMDM) at Neural Information Processing Systems (NeurIPS) 2023.

Teaching Experience

Teaching assistant (KAIST) *Spring 2018 to Fall 2020*

- EE326 Introduction to Information Theory and Coding.
- EE210 Probability and Introductory Random Processes.
- EE105 Electrical Engineering: Changing the World.
- EE405 Electronics Design Lab. Network of Smart Things.
- EE807 Special Topics in EE. Deep Reinforcement Learning and AlphaGo.
  – Course rewarded for the **outstanding TA award** at KAIST EE.
- EE405 Electronics Design Lab. Network of Smart Systems.