Seungyong Moon

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RESEARCH INTEREST

- Adversarial Machine Learning
- Offline Reinforcement Learning
- Generalization in Reinforcement Learning

EDUCATION

- **PhD in Computer Science** Mar 2019 – Feb 2025 (expected)
  Seoul National University, Seoul, South Korea
  Advisor: Hyun Oh Song
  Relevant Courseworks: Advanced Theory in Computation (4190.561), Probabilistic Graphical Models (M1522.001300), Neural Networks (M3309.002300)
- **BS in Mathematics, BA in Economics** Mar 2011 – Feb 2019
  Minor in Computer Science
  Seoul National University, Seoul, South Korea
  Honors: Summa Cum Laude
  Relevant Courseworks: Real Analysis (881.425), Algorithms (4190.407), Introduction to Deep Learning (M2177.004300), Advanced Artificial Intelligence (4190.569)

PUBLICATIONS

- **Seungyong Moon**, JunYeong Lee, and Hyun Oh Song. Rethinking Value Function Learning for Generalization in Reinforcement Learning. In *NeurIPS*, 2022.
- Deokjae Lee, **Seungyong Moon**, Junhyeok Lee, and Hyun Oh Song. Query-Efficient and Scalable Black-Box Adversarial Attacks on Discrete Sequential Data via Bayesian Optimization. In *ICML*, 2022.
- **Seungyong Moon***, Gaon An*, and Hyun Oh Song. Preemptive Image Robustification for Protecting Users against Man-in-the-Middle Adversarial Attacks. In *AAAI*, 2022.
- Gaon An*, **Seungyong Moon***, Jang-Hyun Kim, and Hyun Oh Song. Uncertainty-Based Offline Reinforcement Learning with Diversified Q-Ensemble. In *NeurIPS*, 2021.
- **Seungyong Moon***, Gaon An*, and Hyun Oh Song. Parsimonious Black-Box Adversarial Attacks via Efficient Combinatorial Optimization. In *ICML*, 2019.
  Selected as a long talk (159/3424=4.64%)

HONORS AND AWARDS

- NAVER Ph.D. Fellowship Award 2022
- NeurIPS Top Reviewers (8%) 2022
- Yulchon AI Star Scholarship 2022
- KFAS Computer Science Graduate Student Scholarship 2019 – 2024
- The National Scholarship for Science and Engineering 2015 – 2016
- Gwanak Association Scholarship 2012

TEACHING EXPERIENCE

- Teaching Assistant — Fall 2020, Fall 2022
  Machine Learning (4190.666)
- Teaching Assistant — Spring 2019
  Introduction to Deep Learning (M2177.0043)
- Undergraduate Student Instructor — Fall 2017
  Basic Calculus 2 (033.017)
- Undergraduate Student Instructor — Spring 2017
  Basic Calculus 1 (033.016)

WORK EXPERIENCE

- Research Intern — Jun 2022 – Sep 2022
  DeepMetrics, Seoul, South Korea
  Worked on developing a ventilator control system based on reinforcement learning.
- Research Intern — Jul 2018 – Aug 2018
  NAVER Search & Clova, Seongnam-si, South Korea
  Worked on improving paraphrase identification task via generator-based data augmentation.

ACADEMIC SERVICES

- Conference Reviewer: ICML (2022, 2023), NeurIPS (2021, 2022), AAAI (2022, 2023)
- Journal Reviewer: Neurocomputing (2021)

SKILLS & PROFICIENCY

- Advanced: Python, TensorFlow, PyTorch, JAX, LaTeX
- Experienced: MATLAB, Java
- Intermediate: C++