Masahiro **Negishi**

Summary

I am a second-year master's student at the Graduate School of Information Science and Technology at the University of Tokyo. My research interests include explainable AI, representation learning especially for graphs, and weakly supervised machine learning. An additional area of interest for me is the application of ML within the context of combating climate change. Specifically, I have an interest in creating environmentally friendly materials for batteries or buildings, and detecting illegal deforestation utilizing remote sensing, among other things.

Education

The University of Tokyo *Tokyo, Japan*

B.S. IN INFORMATION SCIENCE *Apr. 2019 - Mar. 2023*

- Awarded an honorable mention for my senior thesis "Pairwise-constraint classification in weakly supervised machine learning: Risk-consistent approach and classifier-consistent approach."

The University of Tokyo *Tokyo, Japan*

M.S. IN COMPUTER SCIENCE *Apr. 2023 - Present*

The Vienna University of Technology *Vienna, Austria*

RESEARCH EXCHANGE STUDENT *Mar. 2024 - Present*

Work Experience

K.K. Best Path Research *Tokyo, Japan*

MACHINE LEARNING ENGINEER *Aug. 2022 - Sep. 2022*

- I was involved in developing an OCR system used in one of Japan's most popular mobile apps.

MATSUO INSTITUTE, INC *Tokyo, Japan*

MACHINE LEARNING RESEARCHER *Oct. 2022 - Aug. 2023*

- I was involved in research on building large-scale world models.
- As part of the outcome of the large-scale world model project, I wrote "Scaling Laws of Dataset Size for VideoGPT" as the first author and gave an oral presentation at the 37th Annual Conference of the Japanese Society for Artificial Intelligence.
- I was also involved in writing two other papers.

OMRON SINIC X Corporation *Tokyo, Japan*

MACHINE LEARNING RESEARCHER *Nov. 2023 - Feb. 2024*

- I was engaged in research on applying machine learning to symbolic regression for scientific discovery.

Honors & Awards

DOMESTIC

2023   **Honorable mention**, the faculty of Information Science, School of Science   *Tokyo, Japan*

Publications

DOMESTIC

Scaling Laws of Dataset Size for VideoGPT *Proceedings of the Annual Conference of JSAI*

Masahiro NEGISHI, Makoto SATO, Ryosuke UNNO, Koudai TABATA, Taiju WATANABE, Junnosuke KAMOHARA, Taiga KUME, Ryo OKADA, Yusuke IWASAWA, Yutaka MATSUO

2023

Construction and Validation of Action-Conditioned VideoGPT *Proceedings of the Annual Conference of JSAI*

Koudai TABATA, Junnosuke KAMOHARA, Ryosuke UNNO, Makoto SATO, Taiju WATANABE, Taiga KUME, Masahiro NEGISHI, Ryo OKADA, Yusuke IWASAWA, Yutaka MATSUO

2023

Scaling Laws of Model Size for World Models

Makoto SATO, Ryosuke UNNO, Masahiro NEGISHI, Koudai TABATA, Taiju WATANABE, Junnosuke KAMOHARA, Taiga KUME, Ryo OKADA, Yusuke IWASAWA, Yutaka MATSUO

Extracurricular Activity

Educational Workshop on Responsible AI for Peace and Security   *Malmö, Sweden*
Participant   *Nov. 2023 - Nov. 2023*

- Took part in the educational workshop held by United Nations and Stockholm International Peace Research Institute.
- Learned about what AI risks are and how to mitigate them with responsible research and innovation.
- Discussed with selected Master's and Ph.D. students from around the world
- Article by United Nations: https://disarmament.unoda.org/update/sipri-and-unodas-engagement-with-next-generation-ai-practitioners/
- Article by SIPRI: https://www.sipri.org/news/2023/sipri-and-unoda-engage-next-generation-ai-practitioners?s=31

Skills

Programming   Python (PyTorch, Numpy, Scipy, Matplotlib, etc.), C++
Languages   Japanese, English(TOEFLiBT 104)