HYUNJAE WOO

jaejaywoo.github.io

EDUCATION

University of Michigan, Ann Arbor *Sep 2021 - (expected) Apr 2023*
M.S.E. in Computer Science and Engineering

University of Michigan, Ann Arbor *Sep 2013 - Dec 2019*
B.S.E. in Computer Science and Engineering

Relevant Courses: Machine Learning, Reinforcement Learning, Data Structure & Algorithm, Probability and Statistics, Linear Algebra, Compilers, Computer Networks, Computer Security, Database Management

WORK & RESEARCH EXPERIENCE

NVIDIA Triton, *System Software Engineering Intern* *June 2022 - Aug 2022*

- Worked with the **Triton Model Analyzer** team [Github] on the automatic model configuration search algorithm.
- Improved the new search algorithm to run 5.8x faster and achieve approx. 93% near-optimal performance.
- Implemented gradient-ascent style hill climbing method that supports multi-objective and constraints in the search.
- Developed data analysis tools to analyze and test the performance of the search algorithm across its variants.
- Contributed to open-source codebase through Test-Driven Development (TDD) and Agile software development.

University of Michigan, Ann Arbor, *Research Assistant* *Oct 2017 - Dec 2020*

Advisor: Honglak Lee

- Published a ML paper at **ICLR** and **UAI** on meta learning and deep reinforcement learning (RL).
- Designed research experiments on StarCraft II Learning Environment and symbolic web navigation domain.
- Implemented various deep reinforcement learning baseline models (i.e. A3C, PPO) using PyTorch.
- Presented a research work at various ML conferences both physically and virtually.

U of Michigan Transportation Research Institute, *Undergrad Assistant* *Jan 2019 - May 2019*

- Developed LiDAR dataset reader in C# that uses Pcap.Net to convert TCP packets into CSV files.
- Collected various LiDAR datasets for each different road lane materials and weather conditions.

Seoul National University, *Summer Research Intern* *May 2017 - Aug 2017*

- Implemented data pipeline for image captioning baseline models (i.e. seq2seq, im2txt) using Tensorflow.
- Developed data preprocessing for large scale multimedia and dialogue dataset, YFCC100M and Ubuntu Corpus.

PUBLICATION

Fast Inference and Transfer of Compositional Task for Few-shot Task Generalization
Sungryull Sohn, **Hyunjae Woo**, Jongwook Choi, Lyubing Qiang, Izzeddin Gur, Aleksandra Faust, Honglak Lee
The 38th Conference on *Uncertainty in Artificial Intelligence (UAI)*, 2022 **(Oral)** [OpenReview / arXiv]

Meta Reinforcement Learning with Autonomous Inference of Subtask Dependencies
Sungryull Sohn, **Hyunjae Woo**, Jongwook Choi, Honglak Lee
In the *International Conference on Learning Representations (ICLR)*, 2020 [OpenReview / arXiv]

AWARDS AND HONORS

University Honors *Apr 2016*
Dean's Honor List *Dec 2013, Apr 2016*
George Washington University SEAS Engineering Awards *Apr 2013*

TECHNICAL SKILLS

Programming Languages Python, C/C++, C#, SQL, Javascript, HTML, CSS, Bash
Skills & Softwares Tensorflow, PyTorch, Scikit-learn, Pandas, Linux/Unix, Git, Gitlab, Docker, GCP, AWS