HYUNJAE WOO

hjwoo@umich.edu ‖ linkedin.com/in/hjwoo ‖ 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, Deep Learning, Computer Vision, Reinforcement Learning, Linear Algebra, Data Structure & Algorithm, Computer Networks, Computer Security, Database Management

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
In the *Neural Information Processing Systems (NeurIPS)* Deep RL workshop, 2021 [OpenReview]

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]

RESEARCH / WORK EXPERIENCE

University of Michigan, Ann Arbor, *Research Assistant* *Oct 2017 - Dec 2020*
- Published a ML paper at **ICLR** and **NeurIPS** 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.

SOFTWARE PROJECTS

Mini Netflix - Video Streaming Content Distribution Network
- Built video streaming content distribution Network (CDN) for multiple client browsers using C++.
- Implemented HTTP proxy for video bitrate adaptation and DNS server for load balancing.

Transfer Learning for Fire Detection
- Built a custom fire dataset for transfer learning with total 617 fire images and ground-truth labels.
- Fine-tuned YOLO-v2 using the pre-trained weights and the custom fire dataset with Python and Tensorflow.

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	PyTorch, Tensorflow, Scikit-learn, Pandas, Linux/Unix, Git, GCP, AWS