

# HYUNJAE WOO

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## EDUCATION

**University of Michigan, Ann Arbor**  
M.S.E in Computer Science and Engineering

Sep 2021 - (expected) Apr 2023

**University of Michigan, Ann Arbor**  
B.S.E. in Computer Science and Engineering

Sep 2013 - Dec 2019

*Relevant Courses:* Machine Learning, Artificial Intelligence, Computer Vision, Reinforcement Learning,  
Data Structure & Algorithm, Computer Networks, Computer Security, Linear Algebra

## PUBLICATION

### 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 [[arXiv](#)]

## RESEARCH/WORK EXPERIENCE

**University of Michigan, Ann Arbor**, *Undergrad Research Assistant*  
Advisors: Honglak Lee and Satinder Singh

Oct 2017 - Dec 2020

- Published a research paper in **ICLR 2020** on Meta Reinforcement Learning (RL).
- Arranged research experiments and implement baselines for SC2LE (StarCraft II Learning Environment).

**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*  
Advisor: Gunhee Kim

May 2017 - Aug 2017

- Implemented data pipeline for image captioning baseline models (i.e. seq2seq, im2txt).
- Implemented data preprocessing for YFCC100M and Ubuntu Corpus datasets

## 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.

### Recycle.it - Eco-friendly Camera-based Web App

- Developed an eco-friendly, camera-based progressive web application using React.js.
- Implemented a barcode scan of a product that informs user with helpful recycling information.

## AWARDS AND HONORS

University Honors

2016

Dean's Honor List

2013, 2016

George Washington University SEAS Engineering Awards

2013

## TECHNICAL SKILLS

### Programming Languages

Python, C/C++, Javascript, HTML, CSS

### Skills & Softwares

Linux/Unix, Git, PyTorch, Tensorflow, GCP