Jaewon **Chung**

Computer Science · Computer Engineering

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Summary

I am a senior student majoring Electrical and Computer Engineering at Seoul National University, South Korea. I am interested in large-scale and/or distributed computer systems that deal with deep learning training and inference workloads. I also try to follow up on state-of-the-art deep learning research during my free time. I seek to apply for a Ph.D. position in the U.S. in late 2020.

Education

Seoul National University

Seoul, South Korea

B.S. student in Electrical and Computer Engineering — *2015 - Present*

- Current GPA: 4.09/4.3 (overall) 4.15/4.3 (major)

Research Experience

Software Platform Lab

SNU, South Korea

Research Intern — *Apr 2020 - Present*

- Developing *Crane*, an elastic GPU cluster manager
- Working with Professor Byung-Gon Chun.

Virtual Machine and Optimization Lab

SNU, South Korea

Senior Project — *Dec 2019 - Jun 2020*

- Distributed DNN inference, Mobile Computing
- Worked with Professor Soo-Mook Moon on developing distributed DNN inferences schemes.
- Proposed a distributed video DNN inference scheme that drastically reduces network traffic by exploiting intermittent knowledge distillation.
- Implemented the scheme with PyTorch and OpenMPI with an NVIDIA Jetson Nano embedded board as the client and conducted evaluation.

Computer Vision Lab

SNU, South Korea

Research Intern — *Jun 2019 - Dec 2019*

- Meta-learning, Few-shot Classification
- Conducted research on better meta-initialization points for Model-Agnostic Meta-Learning (MAML) using an LSTM-based neural memory.
- Conducted research on generating task-aware class embeddings to augment feature maps of MAML by formulating a convex program (DPP).

Lab of Imaging Science and Technology

SNU, South Korea

Research Intern — *Jun 2019 - Aug 2019*

- Quantitative Susceptibility Mapping (QSM), Deep Learning
- Worked with Professor Jongho Lee and submitted our solution to the QSM challenge held by the 5th International Workshop on MRI Phase Contrast and QSM.
- Designed, implemented, and trained a U-Net variant on in-vivo brain MRI field images and their COSMOS results.

Extracurricular Activity

Deepest

SNU, South Korea

Member — *Dec 2018 - Present*

- A free research group on all domains of deep learning. Aggregates researchers from both academia and industry with various backgrounds.
- Gained experience extensively in computer vision and meta-learning, and attended talks on computer vision, natural language processing, reinforcement learning, and speech recognition.
- Gave a talk with the title ”Meta-Learning plus Memory”.

Coursera Global Translator Community

translate-coursera.org

Language Coordinator — *Oct 2018 - Present*

- Served as Language Coordinator, a selected position that reviews and confirms works by other translators.
- Created Korean subtitles for Coursera Lectures initially provided only in English. Focused on courses related to machine learning.

Skills

Programming Python, PyTorch, C, MATLAB, Rust, LaTeX

English TOEFL 120 (Perfect score, Feb 2020), TOEIC 990 (Perfect score, Oct 2018), GRE 167/170/4.5 (Mar 2018)

Publications

- **ShadowTutor: Distributed Partial Distillation for Mobile Video DNN Inference**, Jae-Won Chung, Jae-Yun Kim, Soo-Mook Moon, Proceedings of the 49th International Conference on Parallel Processing, 2020