Dong-Hee Kim

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Introduction

My main research interests are the reliable AI, multi-modal learning and reinforcement learning. I'm ASCII (**A**I/ML Generalist, **S**elf-Motivated, **C**ollaborative and d**I**scussion-fr**I**endly) person!

Work Experience

VUNO Inc. **Aug 2021 –**

- Medical Image AI Research Engineer
- Digital Oncology Team — Aug 2021 – Sep 2022
  - Lymphocyte detection model development
  - PathQuant development & maintenance
- BLU3 Team (Brain part) — Oct 2022 –
  - 3D brain MRI image parcellation model development
  - Amyloid-related imaging abnormalities (ARIA) model development

Publications

- Joint Embedding Predictive Architecture for Self-Supervised Learning of Mask Classification Architecture
  Dong-Hee Kim, Sungduk Cho, Hyeonwoo Cho, Chanmin Park, Jinyoung Kim, Won Hwa Kim.
  Under Review, 2024.
- What Matters for Out-of-Distribution Detectors using pre-trained CNN?
  Dong-Hee Kim*, Jaeyoon Lee* and Ki-Seok Chung.
  International Conference on Computer Vision Theory and Applications, 2022.
- EdgeRL: A Light-Weight C/C++ Framework for On Device Reinforcement Learning
  Sang-Soo Park, **Dong-Hee Kim**, Jun-Gu Kang and Ki-Seok Chung.
  The 18th International SoC Conference, 2021.
- A Confidence-Calibrated MOBA Game Winner Predictor
  Dong-Hee Kim, Changwoo Lee and Ki-Seok Chung.
  IEEE Conference on Games, 2020.

Awards

TIGER(Tumor-InfiltratinG lymphocytes in breast cancER) Challenge Winner **Jun 2022**

2021 Digital Health Hackerthon AI Track TOP5 **Oct 2021**

Projects

Reinforcement learning (RL) framework on edge device **Dec 2019 – Dec 2020**

- Industrial project.
- Implementation of RL framework running on low-power edge device.
- Funded by LG electronics.

AI for playing Puyopuyo

- Personal project.
- Training AI for playing Puyopuyo with actor-critic and A2C.
- Tensorflow 2.x implementation.
- Github: `https://github.com/queez0405/puyopuyoRL`

Communication

Group for presenting deep learning papers **Nov 2019 – Dec 2021**

- Presented over 10 papers from various deep learning fields, including out-of-distribution detection, uncertainty estimation and quantization.
- Youtube channel: `https://www.youtube.com/channel/UCDULrK2OJsiDhFroa2Aj_LQ`

Education

Hanyang University **Sep 2019 – Aug 2021**
Master of Science, Advised by Prof, Ki-Seok Chung
Major in Electronic and Computer Engineering

Hanyang University **Mar 2014 – Aug 2019**
Bachelor of Science
Major in Electronic Engineering

Professional skills

Programming Languages: C/C++, Python, Assembly, Verilog

Frameworks: Tensorflow, Keras, Pytorch, Darknet, Git

Platforms: Linux, Windows, Arduino, Raspberry pi

Teaching Experience

Special Teaching Experience

- Advising Research & Education program for Hansung science high school students.
  May 2020 – Nov 2020

Teaching Assistant

- Microprocessor
  Fall 2019