Kyunghwan Kim

AI RESEARCH · SOFTWARE ENGINEER

Phone: (+82) 10-5115-3748   **Email:** khsyee@gmail.com

Github: https://github.com/MrSyee   **LinkedIn:** https://www.linkedin.com/in/kyunghwan-kim-0739a314a/

Summary

I'm a research engineer who can solve various problems using ML & DL techniques especially in the field of Reinforcement Learning, Natural Language Processing, and Vision. And I'm a software engineer interested in building systems for efficient co-working.

Professional Experience

Medipixel   Research Engineer / Project leader   *Seoul, S. Korea*

Guide-wire control automation with robot for PCI (Percutaneous Coronary Intervention) by Reinforcement Learning (RL) algorithms   *2019.01 - Present*

- Implemented core RL algorithm to control the robot for moving guidewire including DDPG, DQN, and PPO.
- Implemented system pipeline including pre-processed image from X-ray video(CAG), neural network models for actions of robot, and communication to control the robot.
- Implemented algorithms to analyze vessel pathmap to obtain various information including the vector of each path on the branch.
- Constructed systems for integration testing, code versioning, and deployment with tools such as Docker, Jenkins, etc.

Personal Project

- RL Open Source Contribution (As of 22th April, ≥ Total Github ★ 1650)
- Deep learning Projects including Character Story Generator and Automatic Music Composition System with RNN Autoencoder

※ Details are attached to the career description.

Teaching Experience

2019   **Multicampus and Modulabs, "Reinforcement Learning with Tensorflow" Course, Instructor**

2018   **Samsung Software Academy, "Python Basic" Course, Instructor and mentor**

2018   **LG and Modulabs, "Reinforcement Learning Basic", Instructor**

Education

Hansung Univ.   *Seoul, S. Korea*

Bachelor of Electronic Information Engineering (GPA 4.19 / 4.5)   *2012 - 2018*

Awards

2018   **Achievement Award for graduates in Hansung Univ.**

2017   **Grand Prize at Academic Competition for University Students in Korea Digital Contents Society**

2016   **Excellence Paper Award at Fall Conference in 2016 in Korean Institute of Intelligent Systems**

Technical Skills

- Python (Advanced)
  C++, Javascript (Beginner)
- Pytorch, Tensorflow
- Git, Docker, Jenkins, Agile (Scrum, Kanban)

- GAN, DCGAN, SeqGAN, Autoencoder
- Seq2seq, RNN-Autoencoder
- DQN, Rainbow DQN, IQN
- A2C, DDPG. TD3, PPO, SAC, BC, fD

Language

Korean   Native

English   Limited working proficiency