

YOOSEOK LIM

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EDUCATION

Soongsil University

M.S in Industrial and Information Systems Engineering, *Advisor: Sujee Lee*
AI-Healthcare Lab. [[homepage](#)]
GPA: 3.96/4.0

Mar 2022 - Feb 2024

Seoul, South Korea

Soongsil University

B.S in Industrial and Information Systems Engineering
GPA: 3.69/4.0 (cumulative), 3.68/4.0 (major)
Leave of absence for military service: April 2018 – Nov 2019

Mar 2016 - Feb 2022

Seoul, South Korea

RESEARCH INTERESTS

- Integration of Deep Learning Methods for **Healthcare Applications**
- Computer Vision, Reinforcement Learning, NLP, Ubiquitous Computing

PUBLICATIONS AND PREPRINTS

Preprints

1. **Y. Lim**, S. Lee
OMG-RL:Offline Model-based Guided Reward Learning for Heparin Treatment,
Preprint, under review, **2024**
2. **Y. Lim**, I. park, S. Lee
Development and Validation of Heparin Dosing Policies using an Offline Reinforcement
Learning Algorithm, Preprint, under review, **2024**
3. **Y. Lim**, S. Lee
Intelligent Repetition Counting for Unseen Exercises: A Few-Shot Learning Approach with
Sensor Signals, Preprint, under review, **2024**

Journal Papers

1. S. Lee, **Y. Lim**, K. Lim
Multimodal Sensor Fusion Models for Real-Time Exercise Repetition Counting with IMU
Sensors and Respiration Data. *Information Fusion*, **2024**
2. Y. Choe, S. Lee, **Y. Lim**, S. Kim
Machine Learning-Derived Model for Predicting Poor Post-Treatment Quality of Life in Korean
Cancer Survivors. *Supportive Care in Cancer*, **2024**

CONFERENCE PRESENTATIONS

1. **Y. Lim**, I. Park, S. Lee
Improving Medication Treatment Policies with Batch Deep Reinforcement Learning Algorithms,
Conference of the Korean Institute of Industrial Engineers (KIIE), Jeju, Korea, Jun **2023**
2. **Y. Lim**, K. Lim, S. Kim, M. Lee, I. Cho, S. Lee
Meta-Learning Based Exercise Repetition Counting Framework Using a Head-mounted IMU Sensor,
Conference of the Korean Institute of Industrial Engineers (KIIE), Jeju, Korea, Jun **2023**

3. K. Lim, **Y. Lim**, C. Kang, S. Lee
Establishment of BERT-based Personalized Course Recommendation System, Conference of the Korean Institute of Industrial Engineers (KIIE), Jeju, Korea, Jun **2023**
4. M. Lee, S. Kim, I. Cho, **Y. Lim**, S. Lee
SSULET: Real-Time Deception Detection Deep Learning Model, Conference of the Korean Institute of Industrial Engineers (KIIE), Jeju, Korea, Jun **2023**
5. **Y. Lim**, S. Lee
Decision for Optimal Policies on Heparin Treatment using Reinforcement Learning, Conference of the Korea Data Mining Society (KDMS), Busan, Korea, Aug **2022**

RESEARCH PROJECTS

- | | |
|--|---------------------|
| Samsung Electronics, Korea | Sep 2023 - Feb 2024 |
| <ul style="list-style-type: none">· Development of an AI Model and Service Concept based on Canine Activity Data-Main Duties: Proposal writing, Experiment design and implementation, Model development | |
| Soongsil University, Korea | Mar 2023 - Dec 2023 |
| <ul style="list-style-type: none">· Development of a Course Recommendation System based on Natural Language Data-Main Duties: Data collection and analysis | |
| Samsung Electronics, Korea | Jun 2022 - Oct 2022 |
| <ul style="list-style-type: none">· Development of a Counting Algorithm based on Human Activity Data-Main Duties: Experiment design and implementation, Model development | |

PERSONAL PROJECTS

3D Medical Segmentation

- Implementation of Various 3D Image Segmentation Models [[github](#)]

Traffic Sign Detection

- Evaluation of Various Object Detection Model using 2 benchmark datasets [[github](#)]

Autonomous Driving Temperature Measurement Robot

- Development of the Autonomous Driving Robot using Computer Vision, Reinforcement Learning, and Edge Computing technologies [[github](#)]

SERVICES

Reviews

- IEEE Robotics and Automation Letters(IEEE R-AL)(2024)
- IEEE Transactions on Industrial Informatics (2024)
- IEEE International Conference on Automation Science and Engineering(IEEE CASE)(2022,2023)

PATENT

Algorithm for counting weight training using motion data and breathing data together

WORK EXPERIENCE

Manufacturing Systems Laboratory, Soongsil University

Researcher

- research topic : LLM tuning using Reinforcement Learning

May 2024 - Jan 2025

DataTree

Data Analyst Intern

- Investigating and analyzing a korean corpus parsing system

Jan 2021 - Jun 2021

Wantreez Music

Software Engineer

- Planning and developing a company CMS website

Sep 2020 - Dec 2020

HONORS AND AWARDS

Scholarships

Superior Academic Performance Scholarship, Soongsil University

Spring 2022 - Fall 2023

College Achievement Scholarship, College of Engineering, Soongsil University

Fall 2021

Superior Academic Performance Scholarship, Soongsil University

Fall 2016

Awards

Gold Prize, Hyeongnam Science Award

Dec 2021

Honorable Mention, Hanium Contest

Dec 2021

- Travel Destination Recommendation Application

Honorable Mention, Hanium Contest

Dec 2020

- Data Quality Analysis Website

SKILLS

Programming Language: Python, R, C++, JavaScript, Kotlin

Machine Learning: PyTorch, TensorFlow

Others: Raspberry pie, Arduino, ROS

RELEVANT COURSEWORK

Mathematics

Probability and Statistics, Linear Algebra, Engineering Mathematics (Discrete Mathematics), Machine Learning Mathematics

Machine Learning

Reinforcement Learning, Deep Learning, Data Analysis and its Applications, Data Mining, Data structures and Algorithms, Big data processing, Robot Vision