

# YOOSEOK LIM

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## EDUCATION

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### Soongsil University

Mar 2022 - Feb 2024

M.S in Industrial and Information Systems Engineering, *Advisor: Sujee Lee*  
AI-Healthcare Lab. [[homepage](#)]  
GPA: 3.92/4.0

*Seoul, Korea*

### Soongsil University

Mar 2016 - Feb 2022

B.S in Industrial and Information Systems Engineering  
GPA: 3.59/4.0 (cumulative), 3.58/4.0 (major)  
Leave of absence for military service: April 2018 – Nov 2019

*Seoul, Korea*

## RESEARCH INTERESTS

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

## PUBLICATIONS AND PREPRINTS

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### Preprints

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

### 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

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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

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

## PERSONAL PROJECTS

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- 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

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

## PATENT

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

## WORK EXPERIENCE

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| <b>DataTree</b><br>Data Analyst Intern | Jan 2021 - Jun 2021 |
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- Investigating and analysis a korean corpus parsing system

### **Wantreez Music**

Software Engineer

Sep 2020 - Dec 2020

- Planning and developing a company CMS website

## **HONORS AND AWARDS**

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### **Scholarships**

Superior Academic Performance Scholarship, Soongsil University	Spring 2022 - Fall 2023
College Achievement Scholarship, College of Engineering, Soongsil University	Fall 2021
Overseas Industrial Study Tour Scholarship Program, IISE, Soongsil University	Spring 2017
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**

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

Machine Learning: PyTorch, TensorFlow, Jax

Others: Raspberry pie, Arduino, ROS

## **RELEVANT COURSEWORK**

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### **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