YOOSEOK LIM

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EDUCATION

Soongsil University   Mar 2022 - Feb 2024
M.S in Industrial and Information Systems Engineering, *Advisor: Sujee Lee*   *Seoul, South Korea*
AI-Healthcare Lab. [homepage]
GPA: 3.96/4.0

Soongsil University   Mar 2016 - Feb 2022
B.S in Industrial and Information Systems Engineering   *Seoul, South Korea*
GPA: 3.69/4.0 (cumulative), 3.68/4.0 (major)
Leave of absence for military service: April 2018 – Nov 2019

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
  · 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
  · Development of a Course Recommendation System based on Natural Language Data
    -Main Duties: Data collection and analysis

Samsung Electronics, Korea   Jun 2022 - Oct 2022
  · 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 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

DataTree

Data Analyst Intern   Jan 2021 - Jun 2021

  · 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

Scholarships

Superior Academic Performance Scholarship, Soongsil Univsersity   Spring 2022 - Fall 2023
College Achievement Scholarship, College of Engineering, Soongil 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