Yeon-Ji Song

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Education

Seoul National University (SNU) 2021.09 – Present
Ph.D in Interdisciplinary Program in Neuroscience *Seoul, South Korea*
- Advisor: Byoung-Tak Zhang
- Computer Vision, Unsupervised Representation Learning, Video Understanding

Hong Kong University of Science and Technology (HKUST) 2017.09 – 2021.05
B.Eng. in Electronic and Computer Engineering *Clear Water Bay, Hong Kong*

Publications

Unsupervised Dynamic Video Prediction with Object-Centric Kinematics
Yeon-Ji Song, Suhyung Choi, Jaein Kim, Jin-Hwa Kim*, Byoung-Tak Zhang*
Under review

Continuous SO(3) Equivariant Convolution for 3D Point Cloud Analysis
Jaein Kim, Heebin Yoo, Dong-Sig Han, Yeon-Ji Song, Byoung-Tak Zhang
The 18th European Conference on Computer Vision (ECCV) 2024

Learning Object Appearance and Motion Dynamics with Object-Centric Representations
Yeon-Ji Song, Hyunseo Kim, Suhyung Choi, Jin-Hwa Kim*, Byoung-Tak Zhang*
NeurIPS 2023 workshop on Causal Representation Learning

On Discovery of Local Independence over Continuous Variables via Neural Contextual Decomposition
Inwoo Hwang, Yunhyeok Kwak, Yeon-Ji Song, Byoung-Tak Zhang*, Sanghack Lee*
In Proceedings of CLeaR 2023

Work Experience

PitchDaily 2023.03 – 2023.11
Part-time Artificial Intelligence Intern *Seoul, South Korea*
- Created text summarization module using KoAlpaca.

Biointelligence Lab (SNU) 2020.12 – 2021.04
Undergraduate Research Intern *Seoul, South Korea*
- Designed and conducted research on Robotics and Reinforcement Learning.

Surromind (SNU) 2020.07 – 2020.10
Artificial Intelligence Research Engineer *Seoul, South Korea*
- Designed and implemented a Deep Learning model for Pose Estimation based on Detectron2.

Robocore AI 2020.06 – 2020.07
Robotics Software Engineer *Science Park, HongKong*
- Created new solutions for temi robots, combining IOT products and the mobility of temi.
- Performed GUI design, system design and solved real-life customer request with AI solution.

Codecrain Inc. 2019.06 – 2019.09
Full-stack Web Developer *Seoul, South Korea*
- Developed frontend web application along with a senior developer using React.js.
- Implemented React.js and Node.js to enhance functionality and user experience.

Projects

Robot Navigation based on Reinforcement Learning 2020.05 – 2021.05
Final Year Project *HKUST*
- Title: Map-based Robot Navigation and Path planning with Deep Reinforcement Learning
- Proposed ML and RL based algorithm for autonomous navigation in a cluttered environment.

Bundleport 2018.05 – 2020.05
CTO & Logistics Manager *HKUST*
- Created a full-stack web application using Node.js, MySQL, HTML5/CSS3, and JavaScript.
- Developed on cloud server using AWS S3, EC2, Elastic Beanstalk and Cloudfront.

HKUST Robotics Team 2018.09 – 2018.12
Robotics Software Engineer *HKUST*

- Designed and implemented algorithms for processing data from Camera and LiDAR sensors.

HKUST ROV Community Project 2019.02 – 2019.05
Activity Assistant *HKUST*

- HKUST course code: ENGG2900D

Teaching Experience

Multimodal Deep Learning Theories and Applications	2024.09 – 2024.12
POSCO DX 2024 AI Youth Challenge	2024.06 – 2024.08
POSCO DX 2023 AI Youth Challenge	2023.06 – 2023.08
Artificial Intelligence	2022.03 – 2022.06
New Computer Technology (SNU x HKUST)	2022.03 – 2022.06

Awards and Certificates

Best Presentation Paper Award @KCC2024	2024
RoboCup@Home DSPL 2nd Place	2022
HKUST Admission Scholarship	2017