

YE JIN JEON

Mobile: +1-858-319-6979 | Email: run.yjjeon@gmail.com | Page: yejinjeon.github.io

EDUCATION

University of California, San Diego

Sep 2022 – June 2024

Master of Science, Computer Science in Artificial Intelligence

San Diego, USA

- Courses: Probabilistic Reason and Learning, Search and Optimization, Unsupervised Learning, Deep Generative Models, Recommender System, Database system for ML, Convex Optimization, Graduate Networked System
- Thesis title: “Exploring Monte Carlo Tree Search for Combinatorial Optimization Problems” [\[link\]](#)
- Supervisor: Prof. Sicun Gao

Ewha Womans University

Mar 2017 – Feb 2022

Bachelor of Science, Double Major (3.6/4.0)

Seoul, Korea

- Majors: Biomedical Engineering, Computer Science and Engineering | Honors: Dean’s List (2017, Spring 2018)

RESEARCH EXPERIENCES

Machine Learning Research Assistant | University of California, San Diego

March 2023 – Present

- Researching to develop a general search algorithm that enables faster optimal decision-making on various **combinatorial optimization** problems such as job shop scheduling, supply chain planning, and operation research
- Taking a heuristic approach with mixed integer programming solvers and generative model guidance in large input space

Software Engineer Intern | Tanker Inc.

Mar 2021 – June 2021

- Led the ML systems development, improving old systems by finetuning and adopting modern ML-based solutions
- Reduced errors in PDF reader by developing a PDF-to-Excel converter with **optical character recognition models**
- Delivered 5% accuracy improvements on **XGBoost** algorithm for real estate price prediction by feature engineering
- Designed the employee reassignment system for Industrial Bank of Korea using **Google OR-Tools** and **reinforcement learning**

Machine Learning Researcher | Korea University

May 2020 – Sep 2020

- Researched collateral status image generation of stroke patient brain MRIs through 3D multitask learning. Presented work at SPIE Medical Imaging 2021
- Implemented **image-to-image translation** with 3D U-net and improved the performance by adding an ordinal regression task into the final layer of the U-net

Research Intern | Electronics and Telecommunications Research Institute

July 2019 – Aug 2019

- Developed SSD, YOLO, and RCNN-based **object detection** models to detect smugglings from airport security images using **Python** libraries for image processing and **PyTorch**

Research Intern | Ewha Womans University

Mar 2018 – July 2019

- Led research on CNN based **lesion classification** in wireless capsule endoscopy and gave oral presentation at IWAIT-IFMIA 2019

CONFERENCE PAPERS

- **Y.J. Jeon**, H.G. Roh, H.J. Kim, and J.T. Kwak. “Clinical feasibility of deep learning-driven magnetic resonance angiography collateral map in acute anterior circulation ischemic stroke.” Scientific reports, 2024.[under review]
- H.L. Le, **Y.J. Jeon**, H.G. Roh, H.J. Kim, and J.T. Kwak. “3-D multitask deep neural networks for collateral imaging from dynamic susceptibility contrast-enhanced magnetic resonance perfusion.” SPIE Medical Imaging 2021: Computer-Aided Diagnosis (SPIE), 2021.[[link](#)]
- **Y.J. Jeon**, E. Cho, S. Moon, S.H. Chae, and J.H. Choi. “Deep convolutional neural network-based automated lesion detection in wireless capsule endoscopy.” Joint International Workshop on Advanced Image Technology (IWAIT) and International Forum on Medical Imaging in Asia (IFMIA), 2019.[[link](#)]

PROJECTS

Emotional Text-to-Speech

Sep 2022 – Dec 2022

- Implemented **Text-to-Speech models** to convert transcript to speech in the desired emotional tone in **PyTorch**
- Trained a transformer-based encoder in a supervised manner to generate combined embeddings of text and emotion encoding

Recipe Recommender

Sep 2022 – Dec 2022

- Executed sentiment analysis on user reviews and predicted user ratings on recipes through **collaborative filtering**

TECHNICAL SKILLS

Languages: Python, Java, C, Go, SQL, GitHub, Docker, Linux

Frameworks: PyTorch, TensorFlow, Gurobi, Z3, Google OR-Tools