ZHIJIE HE

Master Thesis position

+358 466878171 zhijiehe97@gmail.com https://zhijie-he.github.io/
Espoo, Finland

WORK EXPERIENCE

Didi Chuxing — 08/2021 - 06/2022

Machine learning intern, AI Labs — Beijing, China

- Implemented a **multi-hop carpooling model** with the improved multi-objective genetic algorithm, increasing efficiency by 23%
- Participated in a **user's departure time prediction** project, analyzing users' historical taxi orders, finding the patterns of travel behaviors, and using GBM to build the model
- Participated in a **traffic prediction** project using GRU and GCN to mine road network temporal and spatial features separately that increased the efficiency by 10%
- Developed a task assignment system using **DDQN (Dueling Deep Q Networks)** that **has been deployed in thirteen cities in China**
- Performed **algorithm optimization** and **product deployment**

RESEARCH

Physics-based Character Animation with Sampling-based Trajectory Optimization — 10/2022 - Ongoing

3D animation trajectory optimization using **sampling-based methods** and **reinforcement learning**

- Implement CEM and CMA-ES algorithms searching for characters' trajectory
- Using **Isaac Gym** to simulate and train more efficiently
- **Parallel Computing on Slurm Clusters** to improve efficiency

Automatic Signal Detector — 10/2020 - 03/2021

Computer Vision Project

- Use the Viola-Jones object detection framework to detect faces and eyes
- Use the **Mean-shift/Cam-shift algorithm** to improve efficiency
- Use the **histogram back-projection** idea to detect hand
- Using MLP, Pre-trained CNN and Transfer Learning model to train the dataset

Research on Multi-Objective Project Collaborative Planning and Scheduling Model — 03/2018 - 06/2019

MATLAB's implementation and simulation; Genetic algorithm in **operation research**

- **MPPS**: Implemented a scheduling model with an improved multi-objective NSGA-II algorithm, solving the problem of **assigning resources** in reality and publishing a paper
- **MSPS**: Researched further on the field of **multi-skill human resources**, proposing a new salary strategy to improve employee efficiency, publishing paper in IEEE journal
- Applied for two software copyrights and rated as the excellent student project

https://github.com/Zhijie-He/MPPS

EDUCATION

Data Science, MSc — 09/2020 - 07/2023

EIT Digital Master School

- Entry University: Université de Nice-Sophia Antipolis, France
- Exit University: Aalto University, Finland

Software Engineering, BEng — 09/2016 - 07/2020

Yangzhou University

SUMMARY

Self-motivated; Machine Learning engineer with 1 year of experience solving carpooling models; Research experience in computer vision, operation research and trajectory optimization; Extensive experience in development and deployment

FIND ME ONLINE

Personal Website
https://zhijie-he.github.io/

LinkedIn
https://www.linkedin.com/in/zhijie-he

GitHub
https://github.com/Zhijie-He

LANGUAGES

Chinese	Native	●●●●●
English	Advanced	●●●○○

SKILLS

Python · Numpy · Pandas · PyTorch · TensorFlow · Jupyter · Anaconda

HTML · CSS · JS · MATLAB

MySQL

PUBLICATIONS

A Multi-objective Model for Multi-skill Project Scheduling Problem considering Perform Efficiency

IEEE

https://ieeexplore.ieee.org/document/8948152

Research on a Model of Multi-Project Parallel Scheduling with Flexible Competitive Collaboration Planning

Hanspub

https://www.hanspub.org/journal/PaperInformation.aspx?paperID=27483