BAORUI PENG

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EDUCATION

Beijing University of Technology, Beijing, China   09/2019 – 07/2023
B.Eng. in Electronic Information Engineering, GPA: 3.46/4.2

University College Dublin, Dublin, Ireland   09/2019 – 07/2023
B.Eng. in Electronic Information Engineering, GPA: 3.48/4.2

RESEARCH EXPERIENCE

Research on garbage classification technology based on deep learning   09/2022 – 07/2023
- Grade A for Final report on professional engineering project
- An instance segmentation model that introduces transfer learning in the Mask R-CNN model is proposed. More information is extracted from the image than using the Mask R-CNN model alone.
- The results are viewed from two perspectives, on the one hand comparing the speed of the two models to train the same dataset and on the other hand analysing the accuracy of the final results obtained by the two models.
- Key responsibilities: Data collection and cleaning, model training, paper writing

PROJECT EXPERIENCE

Exploring the value flow effect   03/2021 – 06/2022
- A novel framework CDKCL based on Kirchhoff's circuit laws designed to understand knowledge transfer in citation networks is presented.
- Key responsibilities: Designed a paper-to-paper dependency measurement framework. Calculate the comprehensive correlation using Kirchhoff's circuit law. Use MAG database to conduct empirical analysis on the field of artificial intelligence.

Beijing University of Technology Mathematical Modelling Competition   04/2021 – 06/2021
- Main work: Write reports, analyse and summarise data. Provide optimal printing solutions for different types of books with a view to obtaining the greatest possible sales revenue.
- Key responsibilities: According to the number of models, team members' speciality and competition time, allocate team tasks reasonably and supervise team members to hand over tasks. Data collection and cleaning, model training, paper writing.

WORK EXPERIENCE

Industrial Carbon Neutrality Research Center at Yangtze Delta Region Institute of Tsinghua University   China
Research Assistant   03/2024 – Now
- Focused study on energy conservation and emission reduction
- Devised the design objectives and validation of designs through simulations and testings
- Part of Design group in the team helping with various design decisions

Beijing-Dublin International College   China
Teaching Assistant   09/2021 – 07/2023
- Beijing University of Technology
- Key responsibilities: Answer students' questions during class, guide students to operate the corresponding experiments in lab classes, and correct students' homework and lab reports.

Selected Awards

- Third Prize in Huajiao Cup National College Student Mathematics Competition 2019
- Academic Excellence Awards 2020
- Outstanding Student Leaders (twice) 2021

Skills

Programming Languages: Python, C, Java, Matlab, Verilog
Tools and Frameworks: LaTeX, PyTorch