Ching Ting LEUNG

 GitHub Linkedlin Email Google Scholar

EDUCATION

Hong Kong University of Science and Technology   2021-2025 (Expected)
B.Eng. in Chemical Engineering (Research Option), Artificial Intelligence   *Expected First Honour Graduation*

COURSEWORK

Courses: Advanced Separation Processes (A), Data Science for Molecular Engineering (A+), Chemical and Biological Reaction Engineering (A+), Transport Phenomena II (A+), Process Control and Dynamics (A+)
Awards: 2023 Fall Dean's List, 2024 Spring Dean's List, Top 1% Students in Departments 2023
Bachelor Thesis: Benchmarking and Training Large Language Models (LLMs) in Learning Chemical Engineering Knowledge

RESEARCH EXPERIENCE

McKelvey International Student Research Internship | *Washington University in St.Louis*   2024 Summer
Supervised by Prof. Chenguang Wang

Undergraduate Researcher | *Hong Kong University of Science and Technology*   2023 Fall – Present
Supervised by Prof. Hanyu Gao

Research Assistant | *Auiset Biotechnology Co. Ltd*   2023 Summer – Present
Designing protocols and conducting experiments for nanoparticle synthesis for testing the effectiveness of antibodies

Undergraduate Teaching Assistant | *Hong Kong University of Science and Technology*   2022 Fall – Present
- Calculus I-III (2022 Fall - 2023 Spring)
- Process and Product Design Principles (2023 Fall)
- Introduction to Food Science (2024 Spring)
- Chemical and Biological Reaction Engineering (2024 Fall)

RESEARCH PROJECTS

Optical Molecular Recognition from Chemical Reaction Mechanism Images   2024 Fall
- Attended Annual Conference for American Institute of Chemical Engineers in San Diego, CA, US
- Awarded 1st prize in the session for Computing and Process Control, Undergraduate Poster Session

Large Language Models in Atmospheric Composition Analysis   2024 Summer
- Associated with McKelvey International Research Internship
- Refining current LLMs for air quality prediction and propose quantitative methods in predicting its movements

A Deep Learning Approach of Reaction Mechanism Information Extraction   2023 Fall - Present
- Supervised by Prof. Hanyu Gao
- Created a benchmark dataset that effectively targeted the characteristic of molecules from reaction mechanisms
- Proposed a pipeline in automatic reaction mechanism information extraction

Chem E-Car Competition   2023 Summer
- Attended Annual Conference for American Institute of Chemical Engineers in Orlando, FL, US
- Ranking 11th Worldwide, 2nd in Asia regions

PUBLICATIONS

MolNexTR: A Generalized Deep Learning Model for Molecular Image Recognition   Accepted
Y. Chen, **C.T. Leung**, Y. Huang, J. Sun, H. Chen*, H. Gao*
Journal of Cheminformatics, DOI: 10.1186/s13321-024-00926-w 5f0fe7ee-0388-45f4-8af7-2a839a8319c4

SMiCRM: A Benchmark Dataset of Mechanistic Molecular Images   *arxiv*, 2024
C.T. Leung, Y. Chen, H. Gao*