

Ching Ting LEUNG

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EDUCATION

Hong Kong University of Science and Technology

2021-2025 (Expected)

B.Eng. in Chemical Engineering (Research Option), Artificial Intelligence

Current MCGA: 3.421/4.3

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, University Scholarship

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 do 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)

PROJECTS

Benchmarking and Training LLM in Learning Chemical Engineering Knowledge

2024 Fall - 2025 Spring

- Final Year Thesis for Bachelor degree

Atmospheric Composition Analysis with Multimodality Large Language Models

2024 Summer

- Associated with McKelvey International Research Internship
- Refining current LLMs for air quality prediction
- Build quantitative models for pollutant cloud movement prediction

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 reaction mechanism parsing
- Submitted two papers to Journal of Cheminformatics during project time

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

Submitted

Y. Chen, C.T. Leung, Y. Huang, J. Sun, H. Chen*, H. Gao*

SMiCRM: A Benchmark Dataset of Mechanistic Molecular Images

Submitted

C.T. Leung, Y. Chen, H. Gao*

ReactionImgMLLM: A Multimodal Large Language Model for Reaction Image Data Extraction Submitted

Y. Chen, C.T. Leung, H. Chen*, H. Gao*