Zihan LIU

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Education

City University of Hong Kong (CityUHK) Sep. 2021 – Jul. 2025
Bachelor of Science in Computer Science *Hong Kong SAR*

The Chinese University of Hong Kong (CUHK) Sep. 2025 – Jul. 2026
Master of Science in Computer Science *Hong Kong SAR*

Publications

- Zihan Liu, Flavia Nathaline Chanentia, Patteera Supvithayanond, Chi Chung Alan Fung. Release probability distribution modulates attractor state stability and mobility in continuous-attractor neural networks, *Neurocomputing* https://www.sciencedirect.com/science/article/pii/S0925231225011221.

Experience

Hierarchical Neural Computation Research Unit, RIKEN CBS Feb. 2025 – Present
Research Assistant, Supervisor: Dr. Toshitake Asabuki *Wako, Japan*

- Conduct research on avoiding catastrophic forgetting in neural dynamics.
- Conduct research on neural dynamics of hierarchical motor control system.

Hennig Lab, Bayler College of Medicine Feb. 2025 – Jun 2025
Pre-doctoral Research, Supervisor: Prof. Jay Hennig *Remote*

- Conduct factor analysis and principal angle analysis for neural manifolds consisting of raw neuropixels data of 3 distinct human cognitive tasks

Department of Computer Science, CityUHK Jul. 2024 – May. 2025
Technical Assistant, Supervisor: Prof. Jianping Wang *HKSAR, China*

- Research on a systematic approach for recommending the most suitable motion planning model given different traffic scenarios for rule-based autonomous driving systems

Department of Neuroscience, CityUHK Dec. 2023 – Nov. 2024
Research Intern, Supervisor: Prof. C. C. Alan Fung *HKSAR, China*

- Investigate how Astrocytic NMDA receptors influence neurotransmitter release probability, dynamics of continuous attractor neural networks (CANNs), and short-term synaptic depression.

China Resources (Holdings) Co.,Ltd. Oct. 2023 – Jul. 2023
Technical Intern *Mainland, China*

- Responsible for exploring how to use AI technology to prevent and control safety issues in power production scenarios.
- First version of the plan has been applied to actual production scenarios of subsidiaries such as Cangzhou Electric Power and Chongqing Energy.

HAOMO.AI Technology Co.,Ltd. Jun. 2023 – Aug. 2023
Perception Algorithm Intern *Mainland, China*

- Responsible for algorithm development and engineering implementation of perception modules in autonomous driving.
- Modify and improve existing object recognition algorithms (YOLOv7 based ones) for specific application scenarios in autonomous driving.

Department of Computer Science, CityUHK Jun. 2022 – Aug. 2022
Technical Assistant, Supervisor: Prof. Chung Chan *HKSAR, China*

- Assist in designing DIVE materials, primarily focusing on visualizing concepts in probability theory. Link: https://github.com/dive4dec/divewidgets

Relevant Coursework

- Linear Algebra
- Statistics
- Data Structures
- Computer Network
- Algorithms Analysis
- Operating System
- Digital Systems
- Machine Learning

Basic Skills

Languages: Python, Java, C, HTML/CSS, JavaScript, SQL
Tools: Linux, GitHub