

KAIYAN ZHENG

Personal Resumé

(She/Her)

✉ kaiyanz@umich.edu

in <https://www.linkedin.com/in/kaiyanzheng>

🐙 <https://katherynzheng.github.io>

Education

University of Michigan, Ann Arbor

Ann Arbor, Michigan

Junior, August 2024 - Present

- **Department:** Department of Statistics, Department of Mathematics
- **GPA:** 4.0
- **Program:** B.S. in Data Science & Mathematical Sciences
- **Coursework:** EECS 370 (Computer Organization), EECS 281 (Data Structures & Algorithms), DATASCI 306 (Statistical Computing), MATH 423 (Mathematics of Finance)

The Chinese University of Hong Kong, Shenzhen

Shenzhen, China

September 2022 - July 2024

- **Department:** School of Data Science
- **GPA:** 3.6 (Top 20%, 2022-2024 Dean's List)
- **Program:** Financial Engineering - Quantitative Finance
- **Core Coursework:** C/C++ Programming, Database Systems, Data Structures, Stochastic Processes, Ordinary Differential Equations, Optimization, Discrete Mathematics, Probability and Statistics

Awards

CUHK(SZ) Bowen Scholarship

2022-2024

CUHK(SZ) Dean's List

2022-2024

Second Prize, China Undergraduate Mathematical Contest in Modeling

2023

First Prize, China National High School Biology Olympiad

2021

Research Projects

Federated Unlearning with Gradient Descent and Conflict Mitigation

With Zibin Pan et al.

Research Paper Accepted by AAAI 2025

May. 2024 to Aug. 2024

- At Laboratory of Energy Internet supervised by Prof. Junhua Zhao
- Our proposed FedOSD introduces an unlearning cross entropy loss and calculates an orthogonal steepest descent direction, improving unlearning efficiency and maintaining model utility, which is verified by extensive experiments.

Machine Learning Meets Micro-robotics

With Jiachun Zheng et.al.

Review Article

Oct. 2023 To Jul. 2024

- At Medical Micro-Robotics Laboratory supervised by Prof. Zhuoran Zhang
- Discussed about the recent innovations in learning-based micro-robots, especially in the medical robotics field.
- Responsible for the Planning section in the review

Academic Experience

School of Data Science, CUHK(SZ)

Shenzhen, China

Undergraduate Student Teaching Fellow of CSC1001

Sept. 2023 to Dec. 2023

- CSC1001 [Introduction to Computer Science: Programming Methodology]: Introductory Python course
- Engage in homework grading design for 1000+ students
- Holding labs every week, answering questions for students online and offline

School of Data Science, CUHK(SZ)

Shenzhen, China

Academic Mentor and Academic Coordinator for Future Freshman Winter Camp

Feb. 2024

- Conducted lectures to 250+ students (Introductory Machine Learning) for introducing university courses during the winter camp
- Planned and managing the lecture time slots and materials