

JIAWEI KYLE ZHANG

✉ jiaweiz9@illinois.edu | [in jwzhang](https://www.linkedin.com/in/jwzhang) | [G jiaweiz9](https://github.com/jiaweiz9) | jiaweiz9.github.io | +1 217 3287284

Education

University of Illinois at Urbana and Champaign Champaign, IL
Master of Engineering in Electrical and Computer Engineering Aug. 2023 – Dec. 2024

- GPA: 4.0/4.0
- Selected Courses: Robotics(A⁺), Machine Learning, 3D Computer Vision, Optimization(A⁺)

Wuhan University Wuhan, China
Bachelor of Engineering in Computer Science and Technology Sep. 2019 – June 2023

- Outstanding Student Scholarship, GPA: 3.88/4.0
 - Selected Courses: Operating System, Artificial Intelligence, Software Engineering
-

Experience

Research Assistant Feb. – Dec. 2024
KIMLAB, UIUC Champaign, IL

- Created a reinforcement learning framework in physical world to train Psyonic Ability Hand performing good xylophone tone with real-time recorded audio
- Built up a simulated environment in IsaacGym for dexterous xylophone performing task

Software Development Intern Feb. – June 2023
ZETTAKIT Cloud Ltd. Wuhan, China

- Developed a C++ toolkit for GPU allocation for streaming on Windows and Linux platforms
- Developed a C++ toolkit utilizing Unix Domain Sockets for server parameter configuration, which was adopted by the R&D team

Research Assistant May – Aug. 2022
NERCMS, WHU Wuhan, China

- Enhanced the CycleGAN network for converting between visible and infrared face images, improving the performance of face re-identification
-

Publication

Learning Tone: Toward Robotic Xylophone Mastery Feb. – July 2024
with Prof Joohyung Kim KIMLAB, UIUC

- Action optimization for good xylophone tone generation with reinforcement learning and real-time audio guidance
 - Accepted by the International Conference on Humanoid Robots 2024
-

Selected Coding Projects

Reinforcement Learning for Bi-manual Dexterous Manipulation | *Python* Mar. – May 2024

- Project based on DexArt, with specific new setup for a bi-manual humanoid robot (Atlas)
- Trained a point cloud segmentation model based on simulator-sampled data
- Trained a multi-stage reinforcement learning algorithm in simulator for several bi-manual tasks

CUDA Implemented Convolutional Neural Network | *CUDA, C++* Oct. – Dec. 2023

- Built efficient dense/sparse matrix multiplication, reduction, scan, and histogram algorithms
- Built up the original version of AlexNet, optimized by matrix unrolling, channel reduction and loop unrolling techniques
- Performance analyzing with Nsight-Compute

Automated Garbage Recognition and Recycling System | Python, Qt

June – Aug 2022

- Set up the full process of Data Collection > Model Training > Application Deployment
- Trained a model for recognizing 20+ types of daily waste, incorporated into a complete user-friendly application

Extracurriculars

Member & Organizer

Sep. 2021 – June 2022

Xiaomi Fans Club

- Organized promotional events for Xiaomi's launched consumer products at Wuhan University

Member

Aug. 2019 – Dec. 2020

Debating Club

- Achieved 4th place in the Freshman Debate Competition and was elected as the team's MVP

Skills

Programming Languages: Python, C/C++, JavaScript, Java, HTML/CSS, etc.

Languages: Mandarin (native), English (highly proficient), Japanese (JLPT N1)

Developer Tools: Git, ROS, Jupyter Notebook, Google Cloud Platform, Bash, Docker

Mathematics: Calculus, Linear Algebra, Probability Theory, Convex Optimization

Sports: Basketball, Badminton, Table Tennis