Yiran (Kevin) Zhou

(347) 200-0063 | yrzhou@umich.edu | github.com/kevin-yiran-zhou | linkedin.com/in/kevin-yiran-zhou/

EDUCATION

University of Michigan - Ann Arbor, MI Aug 2024 - May 2026 (Expected)
- M.S. in Robotics **GPA: 3.93/4.0**

New York University - New York, NY Sep 2020 - May 2024
- B.S. in Mathematics, minor in Computer Science **GPA: 3.83/4.0**
- Honors: Cum Laude, School of Engineering Fall 2021 - Spring 2022 Dean's List
- Core Courses: Ordinary & Partial Differential Equations, Applied Probability, Applied Statistics, Computer Programming (Python), Data Structure and Algorithms, Object Oriented Programming (C++), Machine Learning, Databases, Digital Logic, Computer Architecture

RESEARCH & PROJECT EXPERIENCE

University of Michigan, BioElectronic Vision Lab **Ann Arbor, MI**
Laboratory Assistant Sep 2024 - Present
- Developing an indoor localization and navigation system for a smartglass platform to assist people with blindness and low vision. Supervised by Prof. James Weiland.

New York University, VMIL/REACTIV Lab **New York, NY**
Undergraduate Research Assistant Sep 2022 - Jun 2024
- Collaborated with Ph.D. student Anbang Yang to enhance the UNav Vision-Based Navigation System, aimed at improving mobility for people with blindness and low vision. Supervised by Prof. JR Rizzo and Prof. Chen Feng.
- Engineered and deployed a navigation mode selector and an alert system in the UNav Android app using **Java** and **Python**, significantly enhancing user experience in trials with 12 visually impaired participants. Participated in a demonstration to the NSF, helped the team to get a $5 million grant.
- Collected 360° map videos from 3 school buildings, 3 hospital sites, and 2 residential houses to create a system database. Processed videos and build map databases using **OpenVSLAM** and **PyTorch**.
- Tested the UNav Android app and the Jetson Nano wearable device program in various buildings, ensuring robust performance and user safety.
- Enhanced and maintained Python programs and shell scripts on the **Linux** server and NYU HPC.

New York University, Embodied AI Team **New York, NY**
Software Developer Sep 2023 - Dec 2023
- Employed **ROS** and **Python** to craft robot programs, encompassing robot control games and navigation systems.
- Orchestrated the deployment of LiDAR-based SLAM using ROS and Gazebo to generate detailed and accurate navigational maps in diverse environments, enhancing the precision of robotic navigation.
- Integrated Large Language Models (**LLMs**) to refine robot movement controls, significantly improving response accuracy and operational efficiency in dynamic settings.

Final Group Project for Machine Learning Course **New York, NY**
Project Team Leader Nov 2022 - Dec 2022
- Directed the design and optimization of models including logistic regression, SVMs, and neural networks, leveraging Python's **Scikit-learn** to dissect a bank marketing dataset, culminating in a model precision of 91.7%.
- Strategically assigned team roles, leveraging individual strengths to enhance project efficiency and cohesion, leading to the successful completion of the project ahead of schedule.

WORK EXPERIENCE

Caitong Securities **Hangzhou, China**
Finance Intern Jun 2021 - Aug 2021
- Actively collaborated with senior traders to master advanced trading strategies and analyze stock market trends, enhancing trading accuracy and decision-making.
- Developed and implemented **Python** and Excel-based data analysis tools to consolidate and visualize investment data for over 50 funds, significantly improving report clarity for stakeholder reviews.
- Proactively engaged in daily strategic meetings, capturing critical discussions and effectively summarizing outcomes to facilitate decision-making and documentation processes.

SKILLS

- **Programming Skills**: Python (Numpy, Pandas, ROS, Scikit-learn, Tensorflow, Pytorch), C++, Java, Linux, Git, MySQL, Verilog, MATLAB, LaTeX.
- **Languages**: Mandarin (Native), English (Fluent).