

Chenyu Zhu

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EDUCATION

- **Northwestern University** *Evanston, IL*
Master of Science in Robotics *Sept. 2025 – Dec. 2026*
- **University of California, Berkeley** *Berkeley, CA*
Exchange Program *Jan. 2024 – Jun. 2024*
- **Southeast University** *Nanjing, China*
Bachelor's Degree in Automation *Sept. 2021 – Jun. 2025*

SKILLS SUMMARY

- **Programming Languages:** Python, C, C++, Assembly Language
- **Skills:** ROS2, Linux, Git, Parallel Computing, Path Planning, MATLAB, Simulink, Excel
- **Languages:** English (Professional), Mandarin (Native), Japanese (Basic Communication)

INTERNSHIP EXPERIENCE

- **Intuitive Surgical** *Jun. 2024 – Aug. 2024, Shanghai China*
 - Operated the Da Vinci System's daily startup/shutdown, troubleshooting in engineering interface.
 - Conducted experiments to obtain cooling curves for different scalpels, then fit into functions.
 - Prepared daily setups, operated robot, and maintained data logs for 600+ times of tests.
- **General Electric's Healthcare Wuxi Factory** *Jun. 2023 – Aug. 2023, Wuxi China*
 - Designed, coded, and operated a competition robot from scratch, finishing all tasks in two weeks and achieving 3rd place among 10 teams.
 - Wrote and debugged programs for PCI control on PC devices.
- **Cryofocus Medtech** *Jun. 2022 – Sept. 2022, Shanghai China*
 - Implemented PI control to enhance precision by 12% of a cryogenic flow regulator.
 - Assisted in designing a digital-to-analog converting chip.
 - Assisted in user-interface design and user-experience refinements for a cryogenic flow generator.

PROJECTS

- **Picking Up a Pen Using Robot Arm and Realsense Camera** *Sept. 2025 – Sept. 2025*
 - Coded a robot arm to locate a pen with a separate camera, then pick it up and drop it in a box.
 - Planned collision-free paths around obstacles; finished in 2 days.
- **Sensor Node Simulation and Network Topology** *Jan. 2024 – May. 2024*
 - Built a Simulink model from scratch to simulate sensor and transmission nodes, achieving 77% overall accuracy while tackling communication concepts for the first time.
- **Hybrid Electric Vehicle Torque Distribution Study** *Sept. 2023 – Jan. 2024*
 - Built a simulated hybrid vehicle for commute and long-distance scenarios.
 - Optimized torque-coupler logic, increasing mileage by 74% and reducing emissions by 12%.
- **Mobile Robot Spatial Positioning** *Oct. 2022 – Oct. 2023*
 - Integrated laser SLAM with computer vision for forklift navigation.
 - Boosted algorithm accuracy by 126% and improved efficiency/response by 43%.
 - Reduced manual labor by over 60% via automation solutions.
- **Directional Horizontal Drilling Rig Guidance System** *Oct. 2022 – Oct. 2023*
 - Implemented magnetic-signal communication and an obstacle-avoidance vehicle.
 - Contributed to ground-device development for the drilling rig guidance system.

PATENT

- **Saccule folding mechanism, CN 220988900 U:** A structure designed to fold a balloon after inflation for medical treatment in blood vessels. Filed: 2024.05.24.
URL: <https://patents.google.com/patent/CN220988900U/en>