Yuliang Li

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Education

University of Manchester — Manchester, UK
Master of Science in Robotics — *Sept. 2024 – Est Dec. 2025*

- Current GPA: 72.33
- **Modules:** Software for Robotics, Robotic Systems, etc.

Qingdao University — Qingdao, CN
Bachelor of Engineering in Software Engineering — *Sept. 2019 – June. 2023*

- GPA: 3.62/4.0 (87.68/100)
- **Modules:** Object-Oriented Programming, Data Structures, The Design and Analysis of Algorithms, Operating Systems Principles, Software Construction, Database Principles, Big Data Analysis, etc.

Experience

Azure Networking Support Engineer — *Shanghai, CN*
Shanghai Wicresoft Co,.Ltd. — *Dec. 2023 – July. 2024*

- **Networking:** Skilled in designing, deploying, and optimizing Azure network solutions across L4 and L7 layers, with expertise in troubleshooting and ensuring high performance, security, and reliability.
- **Security and Collaboration:** Experienced in resolving network protocol issues, implementing robust security measures, and working with cross-functional teams to enhance Azure services.
- **Customer Support:** Provided high-quality technical support to Premier/Unified-Enterprise customers in the APAC region, resolving high-priority Severity A cases efficiently in English and Mandarin.
- **Communication:** Effective in communicating with customers under pressure, quickly identifying key issues, and ensuring rapid restoration of network services.

Projects

**For better understanding, there are project demonstrations on my website(https://www.lyrance.com).*

Leo Rover Exploration Vehicle — *Sept. 2024 - Mar. 2025*

- **SLAM:** Developed an autonomous exploration system using ROS 2, enabling the robot to perform frontier-based exploration with real-time SLAM, navigate unexplored areas, and automatically return to the starting position. Integrated Nav2, RPLIDAR, IMU, and EKF for mapping and localization.
- **Object Detection:** Implemented real-time object detection using YOLOv8, achieving a 90% detection accuracy within a 60 cm range. Collected and labeled a custom dataset of 2,447 images using the Intel Realsense D435i camera, focusing on various block shapes and angles. Optimized the model through three training iterations to ensure high precision in close-range object recognition.
- **Manipulator:** Utilized the PincherX 150 robotic arm in conjunction with the Intel Realsense D435i camera to capture the target's position in the arm's coordinate frame. Applied the Denavit-Hartenberg (D-H) method to calculate the joint states required for precise positioning. Fine-tuned the grasping force to ensure successful object pickup.

  Keywords: ROS 2, Autonomous Exploration, Frontier-based SLAM, Nav2, RPLIDAR, YOLOv8, Real-time Detection, Robotic Manipulator, D-H Method, Object Grasping.

Weibo Analysis — *Dec. 2022 - May. 2023*

- Achieved an excellent score of 93/100 in the graduation defense.
- **Data Collection:** Developed a Weibo crawler with packet capture analysis to bypass anti-crawling mechanisms, extracting trending topics and storing data in MongoDB.
- **Data Cleaning:** Removed unnecessary elements via regex, applied JIEBA for segmentation, and performed stop-word removal and deduplication.
- **Topic & Sentiment Analysis:** Enhanced LDA with prior knowledge, online learning, and a forgetting

curve. Built a CNN model with Chinese Word Vectors, achieving 90%+ accuracy.

- **UI Development:** Designed a Flask-based visualization system encapsulating all modules with database integration.

Keywords: Web Crawler, Packet Capture, MongoDB, Data Preprocessing, LDA, Online Learning, Forgetting Curve, CNN, Flask, Web UI, Data Visualization.

Student Service Miniprogram *May. 2022*

- **Development:** Built a WeChat mini-program with frontend UI in JavaScript, integrating WeChat APIs for location access and user interactions. Developed a backend for user and database management, enabling sign-in appointments, leave requests, and reporting via HTTP/S communication.
- **Code Management & Deployment:** Collaborated using Git for version control and code synchronization. Deployed and managed the backend on Ubuntu, ensuring system stability and efficiency.

Keywords: JavaScript, HTTP/S, Backend Development, Git, Ubuntu & Server Management.

Fuchsia Document Plan *July. 2022 - Oct. 2022*

- Actively participated as a member of the Fuchsia community in the localization and translation of Fuchsia documentation and guides, providing exploration guides for the Chinese community. Engaged in active communication with other contributors on the latest technologies to collectively advance the development of the open-source community.

Keywords: Open-Source Community, Markdown, LaTex.

Honors & Awards

- Bronze Medal in 2020 China Collegiate Programming Contest (CCPC), Changchun Site
- Silver Medal in 2021 International Collegiate Programming Contest (ICPC), Shandong Site
- 2021-2022 Third-class Scholarship awarded by QDU
- Second Prize in 2022 The 13$^{\text{th}}$ MIIT Software National Competition (Java)
- Silver Medal in 2021 College Student Software Design Competition, Shandong Site
- Second Prize in 2021 The 12$^{\text{th}}$ MIIT Software National Competition (C/C++)
- National Special Prize in 2021 Group Programming Ladder Tournament

Skills & Specialties

Languages: Mandarin/Chinese (Native), English (Professional)

IT Skills: Software Design (C/C++, Python, Java), Front-End Development (Typescript, React, Tailwind CSS, Motion), WeChat Mini Program Development (Java, JavaScript, CSS), Apple Application Development (Swift), IC Design (Verilog, Chisel), etc.

Interests: Photography, Digital enthusiasts, Hardware, Creation, Craft, Game, HAM, PGP, etc.