Ling FENG

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Education

Shanghai Ocean University（Double First-Class University） **Shanghai, China**
BEng Robotics Engineering *09.2021-06.2025*

- Average Points: 3.4/4
- Related Courses: Computer Control Technology (97), Circuit Principles (93), Robot Structure Design Course Design (91), Complex Function and Integral Transformation (96), Signal Analysis and Processing (92), Course Design of Machine Vision and Sensor Technology (Excellent Grade).

University of Manchester **Manchester, UK**
Msc Robotics *09.2025-06.2026*

- Related Courses: Autonomous Mobile Robots, Robotic Systems Design Project, Reinforcement Learning, Cognitive Robotics and Computer Vision, Robotic Systems, Robotic Manipulators

Research Experience

An Optimal-Path-Planning Method for Unmanned Surface Vehicles Based on a Novel Group Intelligence Algorithm (The Second Author of a Tier-1 SCI Journal) *2024*

Position: Researcher

- **Path-Planning Algorithms Evaluation**: Evaluated and developed path-planning algorithms for unmanned surface vehicles (USVs), focusing on dynamic obstacle avoidance, current resistance, and path smoothness. Integrated a novel collective intelligence approach for two-dimensional environments, addressing the complexities of moving obstacles and water currents, ensuring efficient and safe navigation.
- **USV Path Planning Modeling:** Developed a grid-based modeling approach for unmanned surface vehicles (USVs) in a two-dimensional environment. Utilized a simplified point-mass representation for the USV and expanded obstacles to the maximum robot diameter to ensure safety.
- **Simulation and Optimization:** Contributed to simulation studies and optimization techniques using advanced artificial bee colony algorithms in MATLAB, resulting in an 8% increase in optimized path length, a 50% reduction in optimization time, and nearly 100% dynamic obstacle avoidance, significantly enhancing USV navigation capabilities. Improved path smoothness through numerical computations and grid-based modeling of static and dynamic spatial elements.

Innovation and Entrepreneurship Training Program for College Students-- Artificial Intelligence Fish Recognition

Position: Project Leader *09.2023-06.2024*

- **Data Processing and Recognition**: Utilized LabelImg for fish data annotation, created custom training and testing datasets. Applied YOLO for deep learning object detection, optimizing the network model's predictions through iterative learning. Implemented Vuforia for real-time feature matching. Trained the model for 30 epochs, achieving 99% accuracy on the training set and 93.33% on the validation set, with fast convergence and high recognition accuracy.
- **Innovative AI-AR System Development**: Contributed to the breakthrough innovation by integrating Artificial Intelligence (AI) with Augmented Reality (AR) for an advanced fish recognition system. This involved leveraging AI algorithms for swift and precise identification, complemented by AR for vivid 3D visualization, thereby revolutionizing the traditional, less efficient fish identification process.
- **AI Model Training and Interface Development:** Developed and trained AI models using Python and a large dataset of fish images, enabling robust learning and recognition capabilities across diverse fish species and environmental conditions. Created a GUI interface in PyCharm for visualizing fish image recognition results, featuring functionalities for selecting images, displaying predicted and actual categories, and exiting, to validate the system's performance.

Work Experience

Shanghai Quicktron Intelligent Technology Co., Ltd.

Position: Test Engineer *06.2025-09.2025*

- **AGV Core Module Testing & Automation:** Utilized tools such as QS and VOS to perform AGV module interaction testing, functional verification, and system deployment monitoring. Accurately identified product defects and conducted requirement analysis. Developed Python automation scripts, combined with Postman

for API testing and SQL/Navicat for data validation, significantly improving test coverage and execution efficiency.

- **Product Quality Assurance:** Monitored logs and located issues via FinalShell, managed module firmware burning and upgrades. Collaborated with teams to drive continuous product quality optimization.

Suzhou Huibo Robot Co., Ltd.

Position: Robotics Debugging Engineer *06.2024-09.2024*

- **Robot Programming & Teaching:** Programmed and debugged robots using teach pendants to achieve mobile robot positioning and navigation, as well as robotic arm pick-and-place operations.
- **2D Camera Operation & Programming:** Conducted parameter configuration and programming for 2D smart cameras to enable automated image recognition.
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Extracurricular Activities

Cyber Security Summer Camp

Position: Excellent Camper *07.2023*

- **Cybersecurity Education Enhancement:** Participated in the Cybersecurity Summer Camp at Guangzhou University, focusing on advancing the practical and innovative capabilities in the field of cyberspace security. Engaged with top-tier academic and industry experts to deepen understanding of cutting-edge defensive techniques and fostered a proactive security mindset.
- **Professional Curriculum Mastery:** Immersed in the advanced curriculum of cybersecurity, broadened technical horizons, and mastered knowledge of professional courses. The intensive 10-day program facilitated the acquisition of in-depth skills in network attack and defense, enhancing the ability to address real-world security challenges.

Honors

- The Second Prize in the National English Competition for College Students (National Level) *04.2024*
- The First prize of People's Scholarship (University Level) *09.2022*
- The Third Prize of People's Scholarship (Twice) (University Level) *03.2023/09.2023*
- The School Piano Competition Excellence Award (University Level) *12.2023*
- The Outstanding Student Title(University Level) *09.2022*
- The Fifth Place in the Table Tennis Competition of the Campus Cup (University Level) *12.2022*
- The Social Work Activist Designation (University Level) *09.2023*

Additional Information

- **Skills:** Python, Matlab, Cad, Solidworks, Kukasimpro, Keil, Multisim, Altisum Designer，VS，Labview.
- **Certificate:** CET6(580), Piano Level-10.
- **Hobbies:** Piano, Swimming, Table tennis, Travel, Photography.