Jialin Ma

Beijing University of Posts and Telecommunications
Beijing, China
(+86) 18612208835
majialin2023213633@bupt.edu.cn

Education

2023 – Present **B.Eng. in Intelligent Science and Technology**, *Beijing University of Posts and Telecommunications*, Beijing, China
GPA: 3.81 / 4.0
Ranked Top 10 in major
Honors: Outstanding Student Award, Third-Class Scholarship (2024)

Research & Projects

2025 – present **Small Object Detection in Remote Sensing Images**, *Research Project on Object Detection*
- Improved FPN structure with Context-Aware multi-scale fusion for better small-object representation.
- Combined RCNN and Transformer modules to enhance detection precision on DOTA dataset.
- Focused on lightweight architecture optimization and semantic alignment.

2025 **Personalized Emotional Response System based on Multi-turn Emotion Fluctuation Modeling**, *AI Emotion Modeling Project*
- Designed the P-EMF model integrating personality parameters and VAD-based emotional dimensions.
- Implemented Transformer + LSTM architecture with Emotion State Update (ESIU) module using PyTorch.
- Achieved coherent and personalized emotional responses across multi-turn dialogues.

2025 **Laser Target-Hitting Robot Car (National Electronic Design Contest – 2nd Prize)**, *Embedded Vision and Control System*
- Led the **vision and targeting module**, using OpenMV for real-time object detection and target tracking.
- Designed PID-based gimbal control to ensure laser precisely hits the target center.
- Developed a full closed-loop system integrating visual perception, control feedback, and actuation.
- This project sparked my deep interest in **robot vision and visual servoing**.

2024 **Multimodal Interactive Robot**, *Human-Robot Interaction Project*
- Developed a multimodal fusion system combining speech recognition and visual input.
- Implemented real-time communication between modules in Python and C to achieve responsive interaction.

2023 **Beijing Subway Route Query System**, *Software Development Project*
- Built a Flask-based backend for subway route planning using GeoJSON datasets.
- Implemented time-dependent Dijkstra algorithm for both minimum-time and minimum-transfer paths.

Technical Skills

Programming	Python, C, Java
Frameworks	PyTorch, Flask, OpenCV, ROS, MySQL, Git
Algorithms	RCNN, FPN, Transformer, CNN, LSTM
Data Analysis	NumPy, Pandas
Hardware	STM32, OpenMV, LiDAR, Vision Servo Systems, SLAM Mapping

Awards & Honors

2025 **National Undergraduate Electronics Design Contest – 2nd Prize**

2024 **National College Mathematics Competition – 2nd Prize**

2024 Excellent Student (Two Consecutive Years)

2024 – 2025 Third-Class Scholarship (Two Consecutive Years)

Research Interests

Deep Learning for Computer Vision, Visual Perception, and Scene Understanding; Object Detection and Recognition; Vision-based Robotics; and Multimodal Learning for Intelligent Perception Systems.

Personal Statement

An aspiring AI and Robotics developer with practical engineering experience. Passionate about computer vision, especially the integration of visual perception and robotic control. Dedicated to advancing intelligent perception systems that connect AI cognition with real-world physical interaction.