

Li Mingxu

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Major: Software engineering

Research Field: Computer Vision



Educational background

2015.9 – 2019.6	Jiangsu University of Science and Technology / Internet of things	Undergraduate
2019.9 to now	Southwest Jiaotong University / Software engineering	Master's degree

Research and Practice

Paper (2020.09)	Chinese Journal of image and graphics	First author
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Title: Significance detection algorithm of irregular pixel clusters

- Through irregular segmentation, to get better use of texture features and color features, while the algorithm speed and precision are improved.
- A better rough position of the target object is obtained via new center priori and the accuracy of the algorithm is also improved.

Project (2020.9 to now)	Department of science and technology of Sichuan Province	Key developers
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Name: Intelligent urban transportation facilities

In different views of camera, applying computer vision algorithm to traditional transportation domain field, thus improve their ability of statistics planning.

- From the angle of unmanned aerial vehicle, we develop a new multi-target tracking method, which helps to acquire the statistical data. And our performance has advantages compared with the state-of-art method. Furthermore, an object segmentation method is also developed.
- From the angle of the drive recorder, we realize an object-detection algorithm and develop multi-lane lines detection on NVIDIA Jetson TX2, which can execute simultaneously and achieve real-time output.
- From the angle Roadside camera, we realize another MOT method to acquire statistical data.

Project (2017.10–2017.12)	Tunnel authority	Key developers
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Name: Tunnel construction intelligent site integrated platform

It serves the Jishou tunnel of Zhang-ji-huai railway section, mainly including 3D scanning, steel structure quality traceability, document management, vehicle positioning, and other functions.

- Responsible for the development of authority management and document management module.
- Difficulties: Concurrent processing, due to the low concurrency of application environment, pessimistic lock processing is adopted.

Practice Work (2017.7 – 2017.9)	Shenzhen CLON Electronics CO. LTD	Java Developer
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Name: Hefei Qiaqia warehouse management system

It serves for Qiaqia warehouse in Hefei, mainly including warehousing, sorting and discharging, and ex-warehouse tasks.

- Optimize the delivery mode and improve the sorting efficiency. Test the process of warehousing. Learn agile development method, iterative development, and other development methodology..

Competition Work (2017.4–2017.12)	Portable air quality detector	Key developers
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The application is developed for PM2.5 particle concentration detection and air quality prediction.

- Technical point: Mybatis, Android, communication with BLE portable low-power Bluetooth.
- Difficulties: Fitting and predicting the air quality through the least square method combined with the factors affecting the air.

Practice & Award

Award winning	National Scholarship for Graduate Students, National third prize of smart Internet competition, National second prize of mobile Internet competition, Second class scholarship for master's degree in 2019.
Student activities	Director of the Publicity Department of the school of computer science, member of the art troupe, excellent member of the troupe.
Skill	
Skill	Java, MySQL, python, C / C + +, JavaScript, Android development. Violin grade eight.