

# YIN AIWEI

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## EDUCATION

**Politecnico di Milano, Milan (Italy)**

*September 2019 - Present*

Bachelors Degree in Computing Engineering (Double Honors)

**Tongji University, Shanghai (China)**

*September 2016 - July 2019*

Bachelors Degree in Electronic Information and Engineering

GPA: 89.1/100

## EXPERIENCE

**Research Assistant**

*Tongji Intelligent Vehicle Group*

Development of a new SLAM system ([https://github.com/tiev-tongji/quadric\\_slam.git](https://github.com/tiev-tongji/quadric_slam.git))

- Utilization of YOLO to detect objects and used Dual Quadric to represent objects in the 3D environment for pose optimization
- Solution of Data Association problem in SLAM via a Nonparametric function on back\_end

**Research Assistant**

*Broadband Wireless Communication and Multimedia Lab. of Tongji*

Was involved in the development of an Auto-Parking system

- Development of an Around View System
- Deployment of the system on nVIDIA PX2 and testing of the system on real vehicle

**leader of CV group**

*Robomaster 2019 - Team Superpower*

**member of CV group**

*Robomaster 2018 - Team Superpower*

- Utilization of Low-Level Object Detection Algorithm to detect and track a target with high speed (200 FPS) on CPU
- Solve the 3D location of the target and track the motion of target via Kalman Filter
- Control a two-axis gimbal to sight at the target with high speed (response time <100ms) and high precision (steady-state error <0.5°)
- Launch projectiles to hit the motion target in the distance up to 10 meter

## PROJECTS

**Tongji SITP program**

*Pedestrian monitoring in elevator via deep learning*

- Designed and trained an End-to-End Neural Network to count people in the elevator from image

**PhotoStick**

*An Android app for presenting and sharing photos*

- Development of web page and back\_end

**Rail Eyes**

*An IoT railway pedestrian warning device*

- Thales Project Arduino Campus Winner (Second Prize)

## HONORS AND AWARDS

**Robomaster 2019 Final Tournament, Second Prize**

**Robomaster 2018 Final Tournament, First Prize**

**ZhangRenliang student scholarship**

**Tongji excellent student scholarship**

## TECHNICAL STRENGTHS

**Programming** C++/C, python, MATLAB, HTML/CSS/Javascript

**System** Ubuntu, ROS

**Software Library** OpenCV, OpenGL, g2o, Eigen, PyTorch

**Multi-Lingual** Chinese, English, Italian(Basic)