

# SUO QIU

No.38 Zheda Rd, Xihu Dist, Hangzhou, Zhejiang, China 310058  
+86-158-8883-5496 | qs199800@163.com

## EDUCATION

<b>Zhejiang University</b> <b>GPA: 3.75/4.00</b>	<i>B.E. in Automation</i> <b>School Awards:</b> Academic scholarship (Top 25%)	Sept. 2016 – July 2020
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## RESEARCH EXPERIENCE

<b>The Construction of SWIM-Bot Low-cost In-pipe Monitoring Robot and Its Experimental Platform</b> <i>Zhejiang University, Hangzhou, China</i>	<i>Dr. Ni Dong</i> May 2018 – May 2019
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- Used a 3D printer to make the shell of the Swim-bot;
- Used the Arduino 101 development board to record acoustic signals which can later be analyzed to identify leaks and other aberrations within the pipelines;
- Recorded acceleration information by IMU and realized inertial navigation by Matlab.

<b>The Defects Identification on Aluminum Profile Surface</b> <i>Zhejiang University, Hangzhou, China</i>	<i>Prof. Zhao Chunhui</i> Sept. 2018 – Dec. 2018
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- Preprocessed the original images;
- Classify the images by artificial neural network.

<b>Routes Planning for Mobile Robots (Omnidirectional)</b> <i>Zhejiang University, Hangzhou, China</i>	Sept. 2018 – June 2019
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- Designed the static RPT algorithm and communication module;
- Finished the obstacle avoidance algorithm in the static, dynamic and tracking scenarios;
- Completed the final experiment and debugging.

<b>The Design and Development of Path and Loading for Vehicles in Logistics</b> <i>Zhejiang University, Hangzhou, China</i>	Mar. 2019 – June 2019
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- Simulated annealing algorithm to solve vehicle loading problems;
- Used the tabu search algorithm to solve the vehicle routing problem.

<b>Autonomous Wheelchair</b> <i>Advanced Robotics Center, National University of Singapore, Singapore</i>	<i>Prof. Marcelo H. Ang Jr</i> July 2019 – Aug. 2019
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- Conducted literature review on kinematics model, indoor positioning method and target detection algorithm;
- Learned the usage of some classical tools, such as pytorch, caffe, tensorflow, VGG, etc;
- Participated in the test of automatic wheelchair, learned mechanical structure and the arithmetic principles of positioning and navigation;
- Wrote visual-based obstacle detection algorithm, tried the traditional machine vision method based on image segmentation.

## ACTIVITIES

<b>The Swimming Team of Zhejiang University</b> The 17 <sup>th</sup> National University Swimming Championships of 2017	2017
<ul style="list-style-type: none"><li>• Awarded the 2<sup>nd</sup> prize of men's 4*200-meter relay race</li><li>• Awarded the 7<sup>th</sup> prize of 200-meter individual medley</li></ul>	

<b>The School Symphony Orchestra of Zhejiang University</b> • Participated in Zhejiang Undergraduate Art Festival and won the 1 <sup>st</sup> prize of mixed play	2017
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<b>Great Winter Program</b> • Completed the program and attained a certification • Improved English proficiency and learned more about American culture	Feb. 2019
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## AWARD

• Third-Class Academic Scholarship (Zhejiang University)	2015
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## SKILLS & LANGUAGES

**Proficient:** C++, Java, Matlab, ROS;

**Languages:** English(Fluent), Chinese(Native)

**Certifications:** Driving License, The Cello A Level(Special Skill Level)

**Standardized Tests:** *TOEFL*:85

**Interests:** Swim, Cycling, Symphony Orchestra