# Mr Xiaotong Li

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#### **EDUCATION BACKGROUND** п

# Nanjing University of Aeronautics and Astronautics

Major: Aircraft Design and Engineering (Excellence Program) Degree:Bachelor of Engineering GPA: 89/100 Graduation Dissertation: Gradient Enhanced Neural Networks for Optimization of Airfoils

**Technology University of Delft** Major: Robotics

Degree:Master of Science

**Public Exams** IELTS:7.5, GRE: 328+3.5

#### **INTERNSHIP** П

### Beijing, BJROBOT Technology Co. Ltd.

Position: ROS Assistant Engineer Working Contents: Develop TurtleBot3 to do mulitiple missions(reduplicate the function of Autorace)

# Shanghai, Bayer Crop Science Co. Ltd.

Position: ROS Engineer

Working Contents: Use Isaac Sim to build a vivid to life simulation platform of automated guided vehicles in a setting of intelligent agriculture.

#### **INTERNATIONAL EXPERIENCE**

### **KAIST, Human-Robot Interaction Research Center(Summer Camp)**

Focus: Soft Pneumatic Actuators Learn how to design a soft pneumatic gripper and its control method.

#### П **RESEARCH EXPERIENCES**

04/2022-06/2022

#### Responsible for flight control test and its optimization. . 04/2022

Responsible for establishing point clouds for the depth information read by the depth camera and performing plane extraction and calculation of characteristic shapes

Won the second prize

#### 03/2022-03/2023 Leader, Gradient Enhanced Neural Networks for Optimization of Mars Low Reynold Number Airfoil

- Calculated aerodynamic parameters of airfoils at different angles of attack, Ma numbers and Re numbers
- Constructed mSANN with TensorFlow using aerodynamic parameters and corresponding gradient information as training samples
- Optimized mars low Reynolds number airfoil design by using mSANN as a surrogate model coupled with gradient optimization software package SNOPT

08/2021

# Participant, RoboMaster2021 Super Match Play Competition (Central Division)

Participant, MISSION 9 of the International Aerial Robotics Competition (IARC)

- Responsible for the function realization of radar station, that is, using yolo model to identify enemy robots and mark them on our map
- Won the second prize

### 04/2021 Leader, The 6th Jiangsu Provincial Engineering Training Comprehensive Ability Competition for College Students

- Drew the aircraft model and calculated the aerodynamic characteristics with fluent, and produced simulation animations with 3DMax
- Won the second prize

03/2021-03/2022

### Leader, Dynamic Formation Transformation and Obstacle Avoidance of Unmanned Vehicles

- Realized autonomous obstacle avoidance based on slam and multi-vehicle communication through wireless networking, mainly implemented the control of unmanned vehicle through ros system
- Realized mapping and navigation functions with ros, and and conducted simulation tests with gazebo
- Nominated to the 15th National College Student Innovation and Entrepreneurship Annual Conference

#### 03/2021-03/2022 Participant, Research on Positioning and Identification Methods of Logistics Sorting Robot

- Implemented the autonomous object sorting of a logistics robot based on slam, machine vision and neural network
- In charge of slam mapping, production of training sets and training the neural network to recognize the specified objects 11/2020

09/2019-06/2023

09/2023-07/2025

04/2023-05/2023

Participant, RoboCup China Open

07/2022

- Enabled the robot to identify the hole positions on a transparent acrylic plate with the visual recognition system (openmv)
- Won the third prize

08/2020

Participant, RoboMaster2020 Super Match Play Competition (Online)

Participant, Small Fixed-wing Attack UAV System

- Participated in the design and drawing of the mechanical structure of the robot, and learned the overall process of making the competition robots
- Won the second prize

03/2020-04/2021

• Responsible for processing the visual identity system

# **PUBLICATIONS & PATENTS**

 HongYu Chen, <u>Xiaotong Li</u>, Haosheng Li, Bohao Qian, Xiangxiang Li, Computer Software Copyright "Unmanned Vehicle Formation Navigation and Formation Switching System 1.0.0"

# **EXTRACURRICULA ACTIVITIES**

10/2021-

### 10/2019-06/2020 Member, New Media Department, Student Union, Nanjing University of Aeronautics and Astronautics

• Produced the official push of the wechat public account, took photos and edited videos of large-scale activities

### AWARDS & HONORS

2022 First Prize of Academic Scholarship, Nanjing University of Aeronautics and Astronautics
2021 First Prize of Academic Scholarship, Nanjing University of Aeronautics and Astronautics
2020 First Prize of Academic Scholarship, Nanjing University of Aeronautics and Astronautics
2021 Second Prize of Outstanding Student Scholarship, Nanjing University of Aeronautics and Astronautics
2020 Second Prize of Outstanding Student Scholarship, Nanjing University of Aeronautics and Astronautics
2020 Merit Student, Nanjing University of Aeronautics and Astronautics
2021 Merit Student, Nanjing University of Aeronautics and Astronautics
2020 Merit Student, Nanjing University of Aeronautics and Astronautics