Qingyang Wang

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Education

Southeast University **Sep. 2022 – Jun. 2025(Expected)**
Master of Engineering in Control Science and Engineering *Nanjing, China*

- Main Courses: Matrix Theory in Engineering(92); Optimization Methods and Optimal Control(91); Numerical Analysis(81); Linear System Theory(87)

Hefei University of Technology **Sep. 2018 – Jun. 2022**
Bachelor of Engineering in Automation *Hefei, China*

- GPA: 3.73/4.30 (Top 3%)
- Outstanding Graduate (Top 3%) and Excellent Bachelor Thesis (Top 1%)
- Main Courses: Linear Algebra(93); Numerical Analysis(94); Advanced Mathematics(91); Probability Theory and Mathematical Statistics(92); C/C++ Language Program Design(91); Principles of Automatic Control(89); Fundamental of Modern Control Theory(90)

Research Experience

Development of Real-time Optimization(RTO) system for Cement Clinker Burning System **Apr. 2023 – Mar. 2024**
Team Member; Collaborated with Nanjing Kisen International Engineering Co., Ltd *Nanjing, China*

- Participated in model identification of performance indexes during cement burning process based on data characteristic and the first principle;
- Responsible for establishing the optimization problems with the idea of modelling pool, and solving optimization problems using gradient descent and heuristic algorithms in real time;
- Utilized Python to complete the on-site deployment of the complete RTO product at Tongchuan Cement Company(Shaanxi, China) and realized a reduction in coal consumption during cement production;
- Explored ways to perform Dynamic Multi-objective Optimization in real time for the next generation of the product based on OMOPSO and NSGAII.

Design and Implementation of Multi-unmanned Vehicle Digital Management and Control Platform Based on Unity **Nov. 2021 – Jun. 2022**
Bachelor's Thesis; Excellent Bachelor Thesis (Top 1%) *Hefei, China*

- Built a 3D virtual scene in Unity based on the actual UGVs and surroundings through C# and Unity components for monitoring, controlling and algorithms testing for UGVs;
- Implemented interactive communication between Unity and ROS on the unmanned vehicles by both serial and LAN communication in real time;
- Visualized the motion of UGVs in the 3D space of Unity, such as receiving position and attitude data for monitoring, synchronously controlling the motion in Unity, and using Unity's A* algorithm for path planning in real time;
- Designed a modular human-machine interaction interface, including scene database, UGVs tool library, reality-virtual interaction module, and algorithms simulation module.

Scholarship & Honor

The First Prize Scholarship(3% in Hefei University of Technology with 1500 RMB) **Dec. 2021**
Merit Student (2 times)(3% in Hefei University of Technology for outstanding performance) **Dec. 2019 & 2021**
Excellent Bachelor Thesis(1% in Hefei University of Technology for Bachelor's Thesis) **Jun. 2022**
Outstanding graduate(3% for excellent graduates in Hefei University of Technology) **May 2022**
The Second Prize Scholarship (2 times)(top students in Southeast University with 10,000 RMB) **Oct. 2022 & 2023**

Skills & Languages

Languages: Mandarin(Native), English(IELTS: 7.5)
Programming: Python, Julia, Matlab, JAVA