Litian Gong

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Education

University of California, Riverside — *Riverside, CA, USA*
M.S. in Electrical Engineering (advisor: Jiachen Li) — *Sept 2024 – present*
- GPA: 3.94/4.0
- Coursework: Autonomous driving technology, Robotics and AI, Trustworthy AI for Autonomous Systems, Optimal Control

Huazhong University of Science and Technology — *Wuhan, China*
B.S. in Electrical Engineering (advisor: Shaorong Wang) — *Sept 2020 – June 2024*
- Awards: Outstanding Undergraduate Student (Top 20%)
- Key Project: Reinforcement Learning-based Substation Inspection Robot System

Publications

- **L. Gong**, J. Ren, S. Jin, and S. Wang, "A friendly grid-connected distribution system with PV and ESS for remote rural residential family", in *IEEE International Conference New Energy Power Engineering (ICNEPE)*, Hangzhou, China, 2023

Patents

- **L. Gong**, S. Jin, and S. Wang,"A friendly grid-connected Grid-PV-ESS remote residential home power supply system and its working method", in application.
- S. Jin, **L. Gong** and S. Wang, "Image recognition method and system based on network state index convolutional neural network set", CN 116612338A, 2023.
- S. Jin, S. Wang and **L. Gong**, "Variable activation function convolutional neural network and training method thereof", CN 114662678A, 2023.

Research Expericence

Graduate Student Researcher — *Riverside, CA, USA*
Trustworthy Autonomous Systems Lab, UCR — *Nov 2024 – present*
- Simulator for Embodied AI using OmniGibson/IsaacSim
  - Built framework for research on human-computer interactive navigation (code)
  - Developed VLM-Based Object Grasping in cluttered desktop environments (code)
- ROS1/2 Lidar driver configuration (code)
- VLM reasoning in multi-turn RL environment (ongoing)
- Optimized indoor navigation policy using vision-language spatial reasoning (ongoing)

Undergraduate Student Researcher — *Wuhan, China*
Smart Grid Operation & Control Group, HUST — *Sept 2020 – June 2024*
- Designed RL-based Control System for robot inspection in power substations
- Developed CNN Optimizer based on genetic algorithm and entropy improving CNN Image recognition accuracy and efficiency
- Designed Photovoltaic Energy Storage System Integrated Microgrid System

Honors and Awards

- HUST Outstanding Undergraduate Student, 2024. (Top 20%)

- Honorable Mention in Mathematical Contest In Modeling for predictive modeling and data analysis, 2023 (Top 30%)
- Second prize at the provincial level in China Undergraduate Mathematical Contest in Modeling, HUST, Wuhan. (Top 20%)

Skills

Programming: C/C++, Python, Microcontroller System Development, Frontend Development

Languages: English (fluent), Chinese (native)