Xuebing Hou

Phone: 86- 15642680829 12212761@mail.sustech.edu.cn

EDUCATION

Southern University of Science and Technology **Shenzhen, China**

School of Systems Design and Intelligent Manufacturing

Bachelor of Science in Automation ***09/2022- 06/2026***

- **Overall GPA:** 3.66/4.0 87.9/100
- **Core Curriculum:** Artificial Intelligence and Machine Learning (93), Signal and Linear System Analysis (90), Digital circuit (94), Control Theory (87), ect.

RESEARCH INTERESTS

- Machine Learning
- Reinforce Learning

RESEARCH EXPERIENCE

Southern University of Science and Technology **Shenzhen, China**

Developer, Advisor: Prof. Kemi Ding ***09/2024- now***

- **Multi-Agent Task Allocation and Path Planning**

The goal of this project is to design efficient algorithms for multi-agent systems to achieve optimal task allocation and path planning in dynamic environments. This research involves the integration of game theory, optimization techniques, and multi-agent cooperation strategies.

Southern University of Science and Technology **Shenzhen, China**

Developer, Advisor: Prof. Kemi Ding ***05/2024- now***

- **3D Point Cloud Image Localization Using Semantic Segmentation**

The goal of this project is to leverage semantic segmentation techniques for accurate localization of 3D point clouds in real-world environments. This research involves exploring computer vision methods and spatial mapping algorithms.

PROJECTS

Southern University of Science and Technology **Shenzhen, China**

Developer, Advisor: Prof. Kemi Ding ***03/2024- 06/2024***

- **Project: A Multi-Modal Method for Domain Adaptation In Point Cloud Semantic Segmentation**

The goal of this project is to apply transfer learning methods to help neural networks perform semantic segmentation of point clouds. So it involves 3 fields: multi-modal learning, point cloud semantic segmentation, and domain adaptation.

- In order to better utilize all the information of the 2D image, an adversarial training method is used, that is, a discriminator is added behind the 2D segmentation network. The discriminator receives the feature map of the 2D network and determines whether it comes from the source domain or the target domain.
- The CoSMix model can be broadly categorized into three primary components: Semantic Selection, Compositional Mix, and Training and Update, which aim at facilitate robust and adaptive point cloud segmentation across domains. Each section plays a critical role in enhancing the model's capability to generalize and perform effectively in diverse and challenging scenarios.

SKILLS

- **Programming Languages:** Python, C, C++, LATEX, JAVA
- **ML/DL Frameworks and Libraries:** Pytorch, Scikit-learn, Numpy, MatplotlibPandas
- **Software Tools:** Microsoft Office Suite