

Zhang Boxuan

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RESEARCH INTEREST

Computer Vision: Object Detection/Classification in Natural&Remote-Sensing Scenes
Machine Learning: Semi-supervised Learning, Self-Supervised Learning, Active Learning

EDUCATION

Wuhan University

M.E. in Signal and Information Processing

Wuhan, CHN

September 2022 - June 2024 (expected)

- GPA: 3.74/4.00
- Centesimal grade average: 92.08
- Main Course: Machine Learning in Computer Vision (96), Machine Learning (92), Advanced Algorithm Design and Analysis (90), Mathematical Models and Optimization (93)

Wuhan University

B.E. in Computer Science and Technology

Wuhan, CHN

September 2018 - June 2022

- GPA: 3.60/4.00
- Centesimal grade average: 88.81
- Main Course: Multimedia Technology (95), Embedded System (91), Principles of Compiler(95), Computer Graphics(87), Computer Networks(91), Database Systems(93)

RESEARCH EXPERIENCE

Object Detection in Remote-Sensing Images

2022.11-2023.07

- It focuses on Semi-Supervised Object Detection(SSOD) and Active Learning.
- It proposes a novel teacher-student-based framework that boost SSOD by active-learning, where the labeled set is augmented by active sampling, thereby improving the quality of pseudo-labels generated by teacher network and the performance of SSOD model.
- It helps to solve the problem that the available labeled images for object detection are very limited in remote-sensing scenes.

Semantic Segmentation for Open Set Domain Adaptation

2022.01-2022.05

- It focuses on unsupervised domain adaptation and feature alignment.
- It performs feature alignment by means of a cross bilateral filter and depth-based warping, which allows the segmentation model to better migrate between open domains(eg. daytime to nighttime).
- It is the feature alignment that plays a significant role in semantic segmentation field, especially in open set domain scenes.

LSTM based Stock Forecasting Platform

2020.12-2021.02

- This is a platform that can predict the future stock movements by the optimal Long Short Term Memory networks.
- It provides guidance to the users also serves as a hands-on project to familiarize me with deep learning.

PUBLICATIONS (Under Review)

- **Boosting Semi-Supervised Object Detection in Remote Sensing Images with Active Teaching**
Boxuan, Zhang and Zengmao, Wang and Bo, Du
submitted to *IEEE Transactions on Geoscience and Remote Sensing*, 2022. IF: 8.2, Rank: Q1.

KEY SKILLS

Programming Languages LaTeX, Python, Pytorch
Chinese, English