Li **Wang**

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Education

Xidian University

Master in Computer Science and Technology (Double first-class disciplines) — *Sept. 2019-Jun. 2022*

- Average grade: 87.61/100

Ningbo University

Bachelor in Communication Engineering (Double first-class disciplines) — *Aug. 2016-Jul. 2019*

- GPA: 3.45/4.0

Aquaculture (Outstanding class) — *Aug. 2015-Jul. 2016*

- GPA: 3.70/4.0 Ranking: 1/29

Research Experiences

IPIU Lab, Xidian University

Student researcher at IPIU Lab, advised by A/Prof. Xiaohua Zhang

- *Topic* : **Pixels-to-Abundances translation with conditional GAN for hyperspectral unmixing**
- Based on viewing unmixing problem as a transformation of two modalities, firstly proposed a spatial-spectral conditional GAN method to solve the unmixing problem. — *Oct. 2020-Feb. 2021*
- Learned the manifold structure of the hyperspectral data using an adversarial strategy.
- Proposed superpixel segmentation and random splitting method to synthesize data with spatial structure.

Research Institute of Tsinghua University in Shenzhen

- *Topic* : **Pyramid Knowledge Distillation (PKD) for efficient human pose estimation**
- Proposed a novel method, namely pyramid knowledge distillation (PKD) that distills a large, strong, and complex teacher network into an efficient, high-speed, and cost-effective student model. — *Jan. 2021-Mar. 2021*
- PKD composes of pyramid structured map distillation (PSMD) and pyramid featured map distillation(PFMD)
- Formulated a principled structured map and suggested PSMD that distills inter-joint correlation and spatial dependencies. To accelerate the inference speed while keeping the performance, we removed all the conv layers of student's head and presented PFMD to transfer sufficient multi-scale information of teacher network to promote the representing capacity of student model.
- Experimental evidences showed that PKD achieves an optimal trade-off between cost and accuracy on COCO and MPII, even with a much faster inference speed.

Publication

Pixels-to-Abundances Translation with Spatial-Spectral Conditional Generative Adversarial Networks for Hypersectral Unmixing — *IEEE IGARSS 2021*

***Oral* Li Wang**, *Xiaohua Zhang, Shengyuan Zheng, Tianrui Li, Jing Wang*

Highlighted Projects

LED nonlinear compensation system based on MLP

A nonlinear compensation system based on parallel MLP network structure was designed and implemented independently to solve the nonlinear distortion problem in optical communication. The MSE error between the nonlinear distortion signal and the desired signal was reduced from 10^{-2} to 10^{-6}. — *Sep. 2020-Dec. 2021*

Identification of violent acts by drones

For more than 2000 violent video clips shot by drones, YOLOV4 algorithm is used to detect pedestrians, sort algorithm is used to track pedestrians, and TSM online model is used to realize behavior recognition. The accuracy of behavior recognition reached 90%. We eventually deployed the algorithm to the NVIDIA NX development board — *May. 2020-Jun. 2021*

Skills

- CET 6: 509
- Familiar with machine learning theory, proficiency in using Pytorch and has run related experiments.
- Ability to use linux operating system and related commands

Honors & Awards

Nov. 2020 The third class Scholarship

Apr. 2018 **Meritorious Winner,** The Interdisciplinary Contest in Modeling (ICM)

Dec. 2017 Provincial Government Scholarship **(TOP 1%)**

Dec. 2016 Special Grade Scholarship **(Top 1%)**

May. 2016 The Third Prize, National English Competition for College Students (NECCS)