# CHANGJIE LU

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#### **EDUCATION**

# Wenzhou-Kean University

Junior Student

Department of Mathematics Science

# August 2019 - Present

Overall GPA: 3.771/4.0 Major GPA: 3.873/4.0

#### **SKILLS**

Programming skills: Python(proficiency), JAVA, Matlab, R, Maple, Linux, Markdown, Latex

Language: Chinese, English

Framework: Pytorch, Tensorflow, Keras, OpenCV

#### RESEARCH EXPERIENCE

#### Real-Time Bidding

Sept 2021 - Dec 2021

Functional Optimization Reinforcement Learning for Real-Time Bidding

Underreview

- · Designed functional optimization agents (FOAs) using Lagrange multiplier
- · Combine the deep reinforcement learning and functional optimization to learn the agent's causality.
- · Demonstrate the effectiveness of the functional optimization using the multi-agent bidding scenario.

#### Image Deraining

July 2021-Nov 2021

Segmentation-Aware Progressive Network for Perceptual Contrastive Image Deraining 2022 WACV Workshop

- · Our group proposes a semi-supervised segmentation-aware progressive network for single image deraining.
- · Present a novel progressive dilated unit (PDU) embedded with a new channel residual attention (CRA). This design allows efficient usage of multi-scale rain streak information.
- · Design a new perceptual contrastive loss (PCL). By integrating perceptual and contrastive losses, the derained image is close to the GT in terms of pixel-wise difference and fine details.
- · Comprehensive experiments demonstrate that our model surpasses previous state-of-the-arts qualitatively and quantitatively.

#### Image Deblurring

Deblur-YOLO: Fast Real-Time Object Detectionwith Blind Motion Deblurring

Dec 2020-Feb 2021 2021 IJCNN(Oral)

- · Our group presents an efficient object detection model that is robust to motion blur.
- · Introduce Dilated Feature Pyramid Network (DFPN), which utilizes dilated convolution blocks to obtain a larger receptive field with less memory consumption.
- · Design Smooth Peak Signal-to-Noise Ratio (SPSNR), which utilizes smooth l1 loss and effectively measures restored images' smoothness.
- · Qualitatively and quantitatively demonstrate that our model achieves competitive performance against several state-of-the-art image deblurring models on COCO 2014, Set5, and Set14.

#### WORKING EXPERIENCE

Feb 2022 -

## Findability Science

Real Time Optimal Bid Shading for First Price Auction

Sept 2021- Dec 2021 Algorithm Consultant

- $\cdot$  Explain more than five advanced algorithm for their team.
- · Propose a Deep Q Network(DQN) for first price auction.
- · Use Deep learning model DeepFM for CTR prediction.

## Newford Research Institute of Advanced Technology

Data analysis of Zhejiang Province Industry

Oct 2020 - Dec 2020  $Data\ Analyst$ 

- · Data visualization of Industry in Zhejiang Province.
- · Develop a web crawlers script for collecting the data.

### **AWARD**

3rd Price of National Mathematical Contest in Modeling Reviewer of 36th AAAI 2020-2021 Dean List Scholarship 2020-2021 Research Scholarship Invited Speaker in Fudan University

### ACADEMIC INTEREST

Machine Learning, Computer Vision, Reinforcement learning