**Education**

Shanghai Jiao Tong University 800 Dongchuan RD. Minhang District Shanghai,China

ACM Honors Class Zhiyuan college

Zhiyuan Collage is a for training outstanding students in the basic sciences while ACM Honors Class is an elite CS program for top 5% talented students.

**Publication**

Wenxin Zheng, Rui Zhu, **Maosheng Zhu**, A Novel Framework for Natural Language Understanding Based Image Enhancement, in submission to ICCTA2020

**Research Experiences**

**Using deep learning methods to deal with unlabeled graph matching instances.**

SJTU-ThinkLab July 2019 - present

Advisor: Prof. Junchi Yan

Role: student researcher

Detailed work:

* Reproduced results of graph matching using permutation loss and cross-graph affinity methods.
* Used convolutional pose machine to generate potential labels.
* Applied cross-GNN to aggregate features from nodes across graph.
* Used Sinkhorn layer to normalize the affinity matrix into a doubly stochastic matrix.

**An image enhancement project based on mask R-CNN and image matting and CoreNLP** **toolkit**

SJTU Sept. 2019 - Nov. 2019

Advisor: Prof. Cewu Lu

Role: student researcher

* Used Mask-RCNN to segment desired image patch.
* Input the classification result to the natural language analysis model to extract related modifier.
* Refined the result mask by deep image matting.
* Adopted L0 gradient smoothing to create trimap for image matting.
* Applied various image enhancement networks and low level image enhancement models for tasks such as image denoising, haze reduction, illumination enhancenent and contrast preserving, and detail magnification.
* Implemented a voting model to select the best preforming models with combined criterias based on different tasks with SSIM, PSNR and so on.
* Wrote a paper (refer to the publication section)

**Awards**

Zhiyuan Honorary scholarship, Zhiyuan College, SJTU (Top 10% awarded) 2018

**Teaching experiences**

Teaching assistant for Data Structure Course Spring 2019

* Prepared the course project railway ticket management system with other teaching assistants.
* Prepared a programming test.
* Reviewed course project code with other teaching assistants.