Jiang Zihang

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EDUCATION

University of Science and Technology (USTC), Hefei, China 09/2015-06/2019

- Hua Loo-keng Talent Program in Mathematics
- Degree: Bachelor of Mathematics
- Orientation: Computational Mathematics

National University of Singapore (NUS), Singapore 07/2018-08/2018

- School of Computing Summer Workshop
- Orientation: Big Data and Cloud Computing
- Project: Community detection

National University of Singapore (NUS), Singapore 02/2019-now

- Electronical and Computer Engineering
- Research Area: Vision and Natural Language Processing
- Supervisor: Feng Jiashi

INTERNSHIP

Yitu Technology Singapore (Yitu Tech), Singapore 12/2019-06/2020

- Research Area: Natural Language Processing
- Mentor: Yunpeng Chen

RESEARCH PROJECTS

Project name | Conference| Time

- **ConvBERT: Improving BERT with Span-based Dynamic Convolution** 2020,Spring
  Propose a novel span-based dynamic convolution to replace the self-attention heads in BERT to directly model local dependencies and build a ConvBERT model.
- **ReClor: A Reading Comprehension Dataset Requiring Logical Reasoning (ICLR 2020)** 2019,Winter
  ReClor is a dataset extracted from logical reasoning questions of standardized graduate admission examinations. Empirical results show that the state-of-the-art models struggle on ReClor with poor performance indicating more research is needed to essentially enhance the logical reasoning ability of current models.
- **3D Face Reconstruction from A Single Image Assisted by 2D Face Images in the Wild (TMM)** 2019,Fall
  Propose a novel 2D-Assisted Learning (2DAL) method that can effectively use “in the wild” 2D face images with noisy landmark information to substantially improve 3D face model learning.
- **Few-shot Classification via Adaptive Attention (Thesis)** 2019,Fall
  Introduce adaptive attention mechanism for few-shot learning.
- **Disentangled Representation Learning for 3D Face Shape (CVPR 2019)** 2018,Fall
  Apply graph convolution and deformable representation of mesh to construct a framework for disentangling expression and identity components of human face.
- **Community Detection** (Mentor: Leong Hon Wai) 2018,Summer
  Apply VAE and CNN to analysis the data of fashion clothes every year in London Fashion Week (LFW)
  Apply Markov Clustering and Girvan Newman Algorithm to analysis the community detected and to find some insight.
- **Object Removal** (Mentor: Juyong Zhang, Group：face recognition based on deep learning) 2018,Spring
  Inspired by Partial Convolution and Progressive GAN.
  Remove a chosen object in the picture and fix the hole with the background message.

- **Reconstruction of CT Image and Parameters Calibration** (Mathematical Modeling Competition) 2017,Fall
  Reconstruction of CT image based on Radon transform.
  Wining the first price in the competition
- **Car Logo Recognition Based on Synthetic Data** 2017,Fall
  Detect the location of car logo (small object) and classification based on Faster-RCNN (and RetinaNet).
  Also using GAN to generate car logo to improve performance.

LEADERSHIP & EXTRACCURICULAR ACTIVITIY

- **Vice Minister of the Editorial Department**
  Admin of official WeChat Account, participated in writing articles.

SKILLS

Good at python (C++) and TensorFlow (deep learning framework).
Fond of machine learning algorithm, computer vision, community detection.
Having pretty good mathematical foundation (in algebra and matrix analysis) and coding skill to realize ideas.