Guanghao Chen

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Education

University of California, San Diego 2018-2020

M.S. in Computer Science and Engineering, GPA: 3.5156/4.0

Northeastern University, Shenyang, China 2014-2018

B.E. in Computer Science and Technology, GPA: 4.1412/5.0 (Rank: 3/256)

Experience

DeepMap Inc. – Incoming Intern Jun.2019-Sep.2019

- Planning to implement algorithms using point cloud and image data
- Planning to design algorithms for 3D object classification
- Planning to implement efficient data structures

Neusoft Corporation (China) - Intern Jul. 2017-Sep. 2017

- Extracted the salient region based on **FFT, local contrast and Difference of Gaussians**
- Achieved the classifier by merging neural network and SVM
- Built an image recognition system based on dataset (20 categories) and obtained 96.0% accuracy

Research

Face Aging based on conditional generative adversarial network (Course Project) Feb.2019-Present

Advised by Prof. Garrison W. Cottrell

- Modified cDCGAN model by adding an encoder and auto encoder loss function to complete face aging task
- Conducted experiments with CelebA dataset and could complete the task with aged faces

Prediction and Visualization with face related attributes Oct.2018-Jan.2019

Advised by Prof. Garrison W. Cottrell

- Implemented a regression model based on VGG16 network and used the model to predict 40 face related attributes
- Utilized Class Activation Map algorithm to highlight the significant region in a face with heatmap

Intelligent Pedestrian Detection Based on Deep Learning Mar.2018-Jun.2018

- Established a detector using **Faster R-CNN framework** based on **Tensorflow**
- Designed a **HOG+SVM detector** as a supplemental method
- Combined both results and compared the Ap value between **Fusion detector** and **Faster R-CNN**

Person re-identification based on multi-features fusion Feb. 2017- Oct.2017

- Determined End to End framework to merge the pedestrian detection and recognition process
- Extracted image feature with **Convolutional Neural Network (CNN)** and fused with traditional feature
- Published "Bag of Local Features for Person Re-Identification on Large-Scale Datasets" *ICIAP 2018*

Publications

- **Chen, G.**, Wu, J., Jia, C., & Zhang, Y. (2017, Published). A pipeline for reconstructing cross-shredded English document. *2017 2nd International Conference on Image, Vision and Computing (ICIVC)*. **IEEE**.
- **Chen, G.**, Wu, J., Xu, L., & Wang, N. (2017, Published). Comprehensive modeling and planning of urban smart growth. *2017 International Conference on Applied Mathematics, Modeling and Statistics Application (AMMSA)*.
- Liu, Y., Zhang, Y., Chi, J., Zheng, R., Sun, L., **Chen, G.,** Zhou, F. (2018, Published). Bag of Local Features for Person Re-Identification on Large-Scale Datasets. *2018 International Conference on Image Analysis and Processing **(ICIAP)**.*

Technical Skill

Proficient Programming Languages C++, Python, Matlab

Frameworks Pyspark, Pytorch, Tensorflow, Flask, Qt

Database MySQL

Courses CSE250A(Principle of AI), CSE250A(Machine Learning) , CSE252A(Computer Vision), CSE253(Neural Network), CSE255(Data Mining & Analytics), CSE256(Statistical Natural Language Processing)