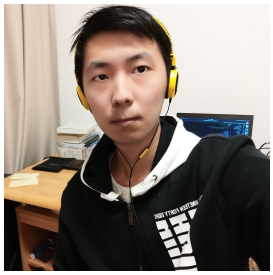

Peng Zheng

Curriculum Vitae

Education

Bachelor: 2015-08 - 2019-07, School: Hebei Normal University, Dept.: College of Software.
GPA: 14/379, 84.39/100

Master: 2019-09 - present, School: University of Trento, Dept.: Department of Information Engineering and Computer Science(DISI).

Research Interests: Computer Vision, Deep Learning.

Research Experiences

0. Video Motion Magnification: 2019-06~2019-12 — We proposed an **unsupervised** way of micromotion magnification.

1. Crowd Counting: 2018-12~2019-07 — My friend and I created a modified FPN architecture which achieved the **SOTA** on almost all famous benchmark datasets in the fields of crowd counting, e.g. SHA-58.3, SHB-6.3, UCF-QNRF-85.6. Due to some reasons, we put on hold this job, but we'll restart it in 2020-01(domain adaptation by GAN was on our schedule).

2. HVAC system based on computer vision: 2018-06~2019-01 — Participate in **Non-invasive thermal comfort measurement** based on deep learning for intelligent building, responsible for applying CNN models to do indoor temperature regression with scanned skin images and indoor factors(magnification on the pores scaling motion will be taken for further improvement).

3. Visibility Detection in the Foggy Scene: 2017/12~2018/4; 2018/10~2019-02 — Participate in the Vision-based Foggy and hazy visibility estimation for intelligent transportation, where I was responsible for the implementation and comparison of a **entropy-based traditional regression** method and a **deep-learning-based** approach.

4. Leaf Vein Extraction: 2016/10~2017/11 — Join in a Sweden Kempe Fund – Vision-based leaf feature extraction for gene analysis, responsible for **the extraction of leaf veins** of aspen leaves based on an original adaptive Canny algorithm, and that of some other morphological features, including curvatures, end points, by pure image processing skills.

5. Others: Single image reflection removal with a twin GAN architecture, traffic flow prediction with LSTM, etc.

Access: Most of work mentioned above can be found on my Github: https://github.com/ZhengPeng7.

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www.github.com/ZhengPeng7
Gender: Male, Birthday: 1998-01-08, last updated: 2019-12

Publications

Paper: 0. *Study on extraction algorithm of leaf vein based on modified canny operator* was published on a Chinese core journal *Application Research of Computers*, accepted in Sep.2018, first author.

Patent: 0. An invention-type patent corresponding to the leaf vein extraction is under application, first applicant.

Skills

Programming/Tools: Python, MATLAB, etc. / Linux, Git, Inkscape, LaTeX, etc.

Libraries: Pytorch, Keras, Tensorflow, OpenCV, etc.

Language Skills: IELTS-6.5, CET4-597, CET6-546

Awards

0. Outstanding undergraduate thesis.
1. Second prize in the National English Competition for College Students.
2. Second prize in the Contemporary Undergraduate Mathematical Contest in Modelling in Hebei Province.
3. Second prize in Lanqiao Programming Competition in Hebei Province.
4. Third prize in the Hebei Big Data Competition.

Internship

Baidu: 2017/12-2018/2 Work as a machine learning algorithm engineer in the department of Recommendation Technology Platform, responsible for the image flow filtration based on the image quality and adaptation on online attentions to affect the models generating different recommendations in the mobile Baidu feed flow.

Personality

Characters: Never angry, never stop, always humorous, love open source and sharing.

Goal: In short term: Make contributions to several CV problems, publish 2 top conference papers during pursuing master degree, and pursue a Ph.D. position after graduation.

In long term: Apply the topology in human visual perception and brain to realize the real image understanding instead of gradient-optimization-based traditional neural network architecture nowadays.

Hobbies: Go, guitar, MOOC, Kafka.

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