Yuwei (Victoria) Qiu

(412)403-9124 • yuweiqiu@andrew.cmu.edu • victoriaqiu.site

Education

Carnegie Mellon University, School of Computer Science — **Pittsburgh, PA**

Master of Computational Data Science (MCDS), CGPA - 4.0/4.0 — *08/2018 - 12/2019(Expected)*

- *Relevant Coursework*: Introduction to Machine Learning(On-going), Introduction to Computer System(A).

Tsinghua University, Department of Electronic Engineering — **Beijing, China**

Bachelor of Engineering, CGPA - 3.8/4.0 — *08/2014 - 07/2018*

- *Relevant Coursework*: Machine Learning(A), Media and Cognition(A), Image Processing(A+), Data Structure & Algorithms(A).
- *Exchange Program*: University of Pennsylvania, Department of Computer and Information Science.

Experience

Software Engineer Intern — **AI Group, Huawei Technologies**

Offline End-to-End Text Recognition System — *11/2017 - 01/2018*

- Cooperated with a group to construct an offline text recognition system utilizing multi-pathway CNNs and statistic conditional random field models with Caffe.
- Boosted accuracy to 96.8% on the 20GB CMCC Database with over 20 million training/validation samples.
- Resulted in the work being used in smart phone products as artificial intelligence tools.

Research Intern — **Tsinghua University**

Interactive System for Human-Centered Data Collection and Analysis — *12/2016 - 06/2017*

- Led a group in developing an interactive experiment system using MATLAB and C++ for 1,280 sets of eye tracking experiments with over 1,000 candidates.
- Proposed and implemented an unsupervised learning approach with Caffe to generate newly defined features.
- Contributed to a **first-authored paper**, accepted as **oral presentation in *ICIG 2017***.

Teaching Assistant — **University of Pennsylvania**

*Summer Session: Visual Intelligence & ML, **under Prof. Jianbo Shi*** — *06/2017 - 08/2017*

- Held recitations, office hours, oral presentations and final review sessions, and graded homework.
- Designed problems, all testcases for programming assignments.

Projects

Context Retrieval on GoPro: Multimedia, PyTorch — **University of Pennsylvania | 07/2017**

- Advised by **Proj. Jianbo Shi** in **GRASP Lab of Penn**.
- Designed advanced LSTM merged with traditional Multi-View Stereo algorithms for sequences processing.
- Established a system for 3D context reconstruction from a 12GB data set of blurry and narrow ego-centric videos.
- Obtained The Outstanding Undergraduate Research Award *(top 1%)*.

Multi-label Image Classification API: ML/DL, MXNet — **Tsinghua University | 03/2018**

- Developed residual learning models to concatenate deep neural networks including DPN and FPN.
- Created an Application Programming Interface(API), increasing precision by 2.2% and 1.3% compared to the-state-of-the-art method on 1.5GB PASCAL VOC 2012 and 20GB MSCOCO 2014 respectively.

Facial Emotion Recognition: Vision, Caffe — **Tsinghua University | 04/2017**

- Established deep networks based on various data sets including VGG-Face dataset, FER2013 public Test, FER2013 private Test and CK+.
- Achieved a mean average accuracy of 92.4% exceeding the-state-of-art frameworks.

Skills

Programming: C/C++, Python, MATLAB, HTML, Linux

Tools: MXNet, Caffe, PyTorch, AWS, Microsoft Azure, Google API

Publications

- Qiu Y., Ma H., Gao L. (2017) Hardness Prediction for Object Detection Inspired by Human Vision. In: Zhao Y., Kong X., Taubman D. (eds) Image and Graphics. ICIG 2017. Lecture Notes in Computer Science, vol 10667. Springer, Cham