

Yuwei (Victoria) Qiu

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Education

Carnegie Mellon University, School of Computer Science **Pittsburgh, PA**
Master of Computational Data Science (MCDS), GPA - 4.0/4.0 08/2018 - 12/2019(Expected)

○ *Relevant Coursework:* Introduction to Computer System.

Tsinghua University, Department of Electronic Engineering **Beijing, China**
Bachelor of Engineering, GPA - 3.8/4.0 08/2014 - 07/2018

○ *Relevant Coursework:* Data Structure & Algorithms, Machine Learning, Operating System, Computer Architecture.

○ *Exchange Program:* University of Pennsylvania, Department of Computer and Information Science.

Experience

Software Engineer Intern **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 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**.

Projects

Context Retrieval from GoPro Videos: Multimedia, PyTorch **University of Pennsylvania | 07/2017**
○ 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%**).

Multilabel 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 **60GB** 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.

Analyze Wiki Dataset with MapReduce: Cloud Computing, Java **Carnegie Mellon University | 09/2018**
○ Implemented MapReduce program to process and aggregate the 30-day wiki dataset (**36GB** compressed).
○ Used TERRAFORM to configure, deploy, execute and debug MapReduce jobs on AWS EMR.

Dynamic Memory Allocator Package: System, C **Carnegie Mellon University | 06/2018**
○ Built a dynamic allocation system with segregated free list and best fit searching with an average utilization of **74.4%**.
○ Achieved a throughput of **15735 Kops/sec** on a 3.10GHz machine with a benchmark throughput of **16920 Kops/sec**.

Skills

Programming: C/C++, PYTHON, MATLAB, JAVA, HTML, LINUX, assembly languages(IA32, x86-64)

Tools: MXNET, CAFFE, PYTORCH, TENSORFLOW, 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