Yuwei Qiu

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Education

Carnegie Mellon University, School of Computer Science **Pittsburgh, PA**
Master of Computational Data Science (MCDS) *08 2018 - 12 2019(Expected)*
- *Relevant Coursework*: Introduction to Computer System.

Tsinghua University, Department of Electronic Engineering **Beijing, China**
Bachelor of Engineering, CGPA - 3.8/4.0 *08 2014 - 07 2018*
- *Relevant Coursework*: Data Structure & Algorithms, Machine Learning, Operating System, Computer Architecture.
- *Exchange Program*: University of Pennsylvania, Computer and Information Science.

Experience

Software Engineer Intern **Huawei Technologies**
End-to-End Printed Chinese Text Recognition *11 2017 - 01 2018*
- Used CAFFE to construct an offline Chinese character recognition system utilizing multi-pathway CNNs and statistic CRF models.
- Boosted accuracy to 96.8% on the 20GB CMCC Chinese Database with over 20 million training/validation samples.
- Resulted in the work being used in Huawei Nova series as artificial intelligence tools.

Research Intern **Tsinghua University**
Hardness Prediction for Object Detection Inspired by Human Vision *12 2016 - 06 2017*
- Built up an interactive eye tracking experiment system with MATLAB, C++ and C#.
- Proposed an unsupervised learning approach with CAFFE to generate eye tracking features from eye tracking data of 1300 candidates recorded by *Tobii Eye Tracker*.
- Contributed to a first-authored paper, accepted as oral presentation in *ICIG 2017*.

Projects

Dynamic Allocator Package For C **Carnegie Mellon University | 06 2018**
- Built a dynamic allocation system with segregated free list and best fit searching algorithm.
- Made efficient usage of space without incurring to much time overheads.

Multilabel Image Classification **Tsinghua University | 03 2018**
- Used PYTHON with MXNET to concatenate advanced neural networks including DPN and FPN.
- Built up an online API for multi-label image classification, 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.

Body Pose Retrieval Based on GoPro Videos **University of Pennsylvania | 07 2017**
- Used PYTHON with PYTORCH to merge traditional Multi-View Stereo algorithms with advanced LSTM.
- Contributed to a system for 3D context reconstruction from a 12GB self-collected data set of highly jittery, blurry and narrow ego-centric *GoPro* videos.

Facial Emotion Recognition **Tsinghua University | 04 2017**
- Used TENSORFLOW to multistage train deep networks 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.

32-bit CPU Design and Implementation **Tsinghua University | 04 2016**
- Designed on an Altera FPGA programming with hardware and assembly languages including Verilog and MIPS.
- Implemented a 32-bit pipeline MIPS CPU to execute basic commands and communicate with portable computers.

Skills

Programming: C/C++, PYTHON, MATLAB, HTML, LINUX, C#
Software Packages: MXNET, CAFFE, PYTORCH, TENSORFLOW, LATEX