# Xianliang Yang

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#### **Education Experience**

### Sep.2016 -

Master degree at Peking University

- Learning cryptology, virtualization and cloud security
- Study the security of OpenStack

Sep.2012 – Jun.2016

Bachelor degree at Northwest University

- Wrote about 50 thousand code
- Focused on data structure, operating system and network



#### Internship Experience

## Sep.2017 -

# Microsoft Research of Asia, IEG Group, Face Team

#### Cntk To Caffe Convertor

For Convolution Natural Network, convert Cntk model to Caffe model.

It can deal with convolution, full-connected, relu, pooling, splice, dropout and softmax layer.

For AlexNet, GoogleNet, ResNet and other main CNN model, the error after conversion is about 8 decimal places.

#### • Benchmark Tool

For different planform and environment, test the speed of convolution with different libraries.

Test planform includes Linux, Windows, Android, iOS

Test library includes NNPack, MKLml, Cuda and MKLDNN, OpenBlas.

#### • New CNN inference

Baesd on Benchmark Tool, find the best calculation methon in different input and parameter and combine as a new CNN inference. Optimate the calculation graph and memory usage.

Support multithreading.

#### Jan.2017 - Sep.2017

#### Apple R&D (Beijing) in China, Wireless Team

#### The test and maintenance of the interface to detect and filter spam message in iOS11 and the development of SpamSMSLite

With IdentityLookup and its interface in iOS11, build the app extension to detect and filter the messages.

Build the internal server to check the message in cloud, which can transform the format of communication

and encryption the message with nginx, uwsgi, flask and Python.

# • The initialize of radar and the structured processing of Qualcomm logs in call

Transform the Qualcomm logs to text with APEX and transform the text to structured data with Perl.

Process the logs in call with structured data, such as analyze the reason of call drop and count the bit in different line.

#### Project Experience

#### An operation system which can run on bare computer

Support visualization, multitasking, the management of memory, process and file.

Design detail include: start sector, system boot, protection mode, graphics card mapping, palette, interrupt vector table,

interrupt mechanism, segment table, process and process control block, process communication and file system.

API: buffer, multitasking and process communication, mouse and keyboard events, font design, timers, layers, windows and focus.

Application: calculator, text editor, image browser, music player, task manager and memory manager.

#### Personal Skill

### Professional skills

C/C++ > Python = Java > C# = Matlab = obj-c = shell > nasm = Perl

Be familiar with data structure and common algorithm.

Understand some machine learning algorithms.

Understand convolution natural network. Be familiar with Cntk and Caffe Frame