HU, YIXUAN Y.H. 胡以璇

Curriculum Vitæ

Shatin, New Territories, Hong Kong S. A. R
+(852) 6213 4882
huyixuanhyx@gmail.com
http://yeephycho.github.io

Education

2014 – 2015 **Master of Science**
Telecommunications
The Hong Kong University of Science & Technology

2010 – 2014 **Bachelor of Economics**
Finance
Harbin Institute of Technology

2009 – 2013 **Bachelor of Engineering**
Traffic Information & Control Engineering
Harbin Institute of Technology

Professional Skills

Professional Skills: **C/C++**, Python, Native java, **OpenCL**, CUDA, OpenGL, **OpenMP**, Pthread, BLAS, **Neon Instruction Set**, SSE, **OpenCV, Tensorflow**, Torch7

Background Skills: Digital Signal Process, Matlab, **Linux**, MacOS, Windows, LaTeX, Markdown, MS Office

Basic Skills: Lua, Verilog, Assembly language, Protocol Buffers, SWIG, Bazel, Android, Git, FPGA, ARM

Professional Knowledge

Parallel Computing: SIMD, MIMD programming, Neon intrinsic optimization, concurrent design & **GPU computing**.

Machine Learning: **Deep Convolutional Neural Networks**, MLP, AlexNet, GoogleNet,**Inception**, ResNet etc.

Memory System: Modern Memory System, Bus System, **Cache System**. Practical exp. to optimize software memory access.

Process management: Unix-like OS process management, fit software to un-symmetric Big-Little CPU architecture.

Work Experience

Current, from Feb. 2017

Hong Kong Applied Science & Technology Research Institute
Multimedia Processing Engineer
Focus on portable real time computer vision system and deep learning applications

Fast 360 Degree Panoramic Image Stitching on Android
Key word: OpenMP, Neon, Real time embeded VR
Stitiching images from two fish eye camera together to form a 360 degree view image for real time VR live broadcast

Pedestrian Tracking for Smart Surveillance
Key word: CNN, Deep Learning, Asynchronous Computing
Apply deep learning on high accuracy real time pedestrian monitoring

Feb. 2017, from Jul. 2015

TCL Corporate Research, Hong Kong
High Performance Computing Engineer
Responsible for computer vision algorithms acceleration, SIMD design, GPU software design and multi-processor algorithm design, from server to mobile.
Balance algorithm performance and hardware resource occupancy & energy consumption.

Patent

An Audio High Frequency Signal Reconstruction Algorithm: *CN2016103403041*
Key word: Digital Signal Processing, Time Series Analysis
An algorithm that use the low frequency audio signal to speculate and reconstruct high frequency part for music player. Turn low quality music source to 192kbps HiRes audio signal.

An Bluetooth Based Tracking and Localisation Algorithm: *CN2016112700564*
Key word: Digital Signal Processing, Bluetooth Localisation
An algorithm that use multiple bluetooth devices' RSSI to infer target device's location, to realise automatic tracking for UAV or other devices

Miscellaneous

- **Githuber**, hacker spirit, programming lover
- Interested in Kant philosophy and Metaphysics
- Critical and creative thinking, good logic stringency
- Photographer, visual arts fan
- Cumulative blood donation 1600 cc