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 Jul. 2015

TCL Corporate Research, Hong Kong
High Performance Computing Software Engineer

Provide software acceleration to computer vision team of TCL Research Co. Including computer vision algorithms optimization, instruction vectorization design, GPU program design and multi-processor program design under miscellaneous environments such as Android or embeded systems, balance the algorithm performance and hardware resource occupancy&energy consumption.

Torch-Android Deep Learning Tool Optimization
Key word: OpenMP, OpenBLAS, Neon

Optimize Torch Android Deep Learning Framework.

Accelerated Facial Landmark Tracking for Face Morphing Application
Key word: OpenMP, Pthread, Neon

Mesh 68 feature points on human face to the camera view of mobile phone to realize real time face morphing and argumentation.

OpenCL Based LBP Feature Face Detection on Android
Key word: Mobile GPU, OpenCL, Face Detection

Migrate local binary pattern feature face detection to mobile phone. Port preprocess and detection algorithms onto mobile GPU to improve the energy efficiency.

Real Time PCA Face Recognition on Android
Key word: OpenCV, Face Recognition, Android

Run offline trained PCA model on mobile phone to realize real time face detection and recognition.

An Audio Signal High Frequency Induction and Reconstruction Algorithm
Key word: Digital Signal Process

Extract audio signal feature to reconstruct high frequency part. Turn the low quality audio to Hi-Res 192kbps signal. State Intellectual Property Office of the P.R.C. Patent Indexing No.: 201610340304 1

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