Jia Wan

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RESEARCH INTERESTS

- Software Reliability and Security, Algorithms, Distributed and Cloud Computing, Embedded Systems, Artificial Intelligence, Human Computer Interaction

EDUCATION BACKGROUND

Huazhong University of Science and Technology (HUST) **Sep. 2007 – Jun. 2009**

- **Degree:** MEng
- **Major:** Communication and Information Engineering
- **GPA: 87%**

China University of Geosciences (Wuhan)(CUG) **Sep. 2003 – Jun. 2007**

- **Degree:** BEng
- **Major:** Communication Engineering
- **GPA:** 83%

RESEARCH EXPERIENCE

Internet Technology and Engineering R&D Center, HUST **Sep. 2007 – Jun. 2009**

- ***BST Network Monitoring System Development:*** developed a network video surveillance system (called IP camera) based on ARM and Embedded Linux. IP cameras are now widely used at homes, offices and factories, with which users can capture real-time and dynamic pictures through network.
  - ✧ Redeveloped the FFmpeg codec library to implement audio/video coding based on MPEG4
  - ✧ Transplanted and implemented the XML network communications control module
  - ✧ Built the SIP proxy server and MySQL modules and added authentication security features
  - ✧ Developed the windows client and implemented all required modules including GPS, SIP travel through NAT models
- ***Research On P2P Streaming Media System Model In Embedded Devices:*** Researched into a new P2P streaming media transmission system, which could support the streaming media distribution that allowed a large number of IPTV users to watch at the same time.
  - ✧ Built the system model and studied the communication mechanisms between all nodes
  - ✧ Researched the scheduling algorithms and buffering mechanisms of nodes
  - ✧ Implemented the system in an embedded device through C language programming

Information Technology Lab, CUG **Jul. 2006 – Jun. 2007**

- ***SIP-based VOIP:*** Researched and developed a SIP-based VOIP network telephone system which had been launched to China's market.
  - ✧ Learnt about the basics of SIP signalling and implemented the SIP signalling module
  - ✧ Implemented the SIP proxy server i.e. user authentication, signalling delivery and forwarding
  - ✧ Solved the NAT traversal of SIP problem
- ***Injection Molding Workshop Internet of Things Project:*** Developed the workflow control system which connected the machine control system to the network to allow the workers to accomplish injection molding process and product management remotely
  - ✧ Developed the programs including RF card reading, screen display and network data transfer modules based on ARM using C language
  - ✧ Designed and implemented the IOCP server in C language for Windows

WORKING EXPERIENCE

Android Engineer, IQIYI Corporation **Jun. 2014 – Present**

Duty: *Android system and system app development for IQIYI TVGUO(a device like Chromecast)*

- ***Multiscreen Project Development:*** developed a system app on box and a protocol plug-in library for mobile application based on DLNA technology to share the digital media content(Movies, Music or Pictures) from phone to the TV screen
- ***Voice Recognition Application:*** developed a mobile app and a system app for box to integrate voice wakeup, voice recognition, speech synthesizer so as to control the behaviors of box like movie selection by voice, operation guidance, etc.

Android Framework Senior Engineer, Intel Corporation OTC **Oct. 2012 – Jun. 2014**

Duty: *Android framework development on Intel phone/tablet boards based on Atom series CPU*

- ***Framework/App Debugging and Patching:*** solved issues like memory leak problems, instability and bad user experience (SystemUI, Gallery and Camera etc.). Submitted related patches to google android open source gerrit and patches have been approved and merged in the latest android system.
- ***Multi-window UI Solution Design for Tablets:*** designed the UI and animation of the windows; Developed a multi-window demo designed for Application Engineer for exhibition
- ***Multi-display Demo Implementation:*** developed a demo supporting multi-display with multi-touch and different apps are responding to interaction synchronously on different screens.

Linux BSP Engineer, Marvell Technology Group Ltd. **Jun. 2009 – Oct. 2012**

Duty: *PXA9xx and Armada series BSP development and technical supports*

- ***Power Management Driver Development:*** developed the drivers for PXA9xx series chips to enable dynamic frequency scaling and power saving modes management in Android devices
  - ✧ Designed the clock tree architecture to control modules' clocks
  - ✧ Implemented the system reboot and power off process
  - ✧ Conducted statistics on DDR, VPU, GPU performance, analyzed the statistical data and designed dynamic frequency management schemes to save power
  - ✧ Developed power management interfaces for engineers to debug and analyze
- ***Camera Driver Development:*** developed camera drivers for PXA9xx and Armada series chips which support front and rear cameras on mobile phone reference design platforms
  - ✧ Aligned camera sensor driver to support one sensor on different platforms
  - ✧ Wrote camera driver usage code for QA and HAL engineers' reference
  - ✧ Subscribe Linux media mailing-list, submit camera driver, report problems about common interface to open source community and patches proved
  - ✧ Gained solid knowledge about Linux media V4L2 and videobuf2 architecture
- ***Technical Supports for RIM:*** went to Canada for two months acting as technical support engineer to provide technical supports for RIM in developing Linux camera drivers, power management drivers and kernels (Nov. 2010 – Dec. 2010)

PROFESSIONAL SKILLS

- **Android Framework and Application Development(3 years of development experience)**
  - ✧ Framework GUI, multimedia framework, Input system, WMS, AMS, DMS development for feature differentiation; Surface Flinger, Binder architecture
  - ✧ Android system and application development, DLNA, UPNP technology

- **Linux BSP Development(3 years of development experience)**
  - ✧ Linux camera framework V4L2 and its open projects: soc-camera, media controller
  - ✧ Linux power management architecture, such as cpufreq, cpuidle, devfreq, etc.
  - ✧ Linux drivers like I2C, RTC, keypad, touch screen, charger, battery, GPIO, LCD, sensor etc.
- **Linux Network Programming(2 years of development experience)**
  - ✧ Embedded environment and network domain development; TCP/IP protocol stack; Linux network and multi-thread programming
- **Programing Languages and Scripts**
  - ✧ C, C++, Java, Python, shell script, git integration

PUBLICATION

- ZUO Dong-hong, **WAN Jia**.A p2p media streaming delivery scheduling algorithm for embedded system[J].Journal of Chinese Computer Systems, 2009, 30(9):1882-1884.

HONOURS AND AWARDS

Excellent Graduate Student of HUST	Top 5%	2009
"Merit Graduate Student" of HUST	Top 5%	2008
First-class Scholarship for Graduate Student	Top 5%	2008
First-class Scholarship for Graduate Student	Top 5%	2007
Recommended Exam-exempted Graduate Student for HUST	Top 2%	2007
"Merit Undergraduate Student" of CUG	Top 1%	2006
"Renmin" First-class Scholarship	Top 5%	2006
Outstanding Undergraduate Student of the College	Top 2%	2005
"Renmin" First-class Scholarship	Top 5%	2005
"Merit Undergraduate Student" of the College	Top 2%	2004
"Renmin" First-class Scholarship	Top 5%	2004