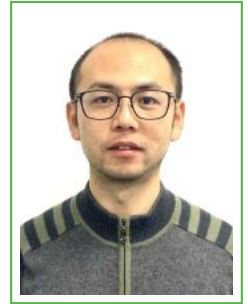


# Zhiqiang Xu

Senior software architect

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*Work as a hacker. Hack as an artist.*

## SUMMARY

- B.E. with 15 years software develop experience.
- Especially, 14 years embedded software develop experience. Including 3 more years on vehicle related projects development, 7.5 years on developing mobile phone, and 3.5 years on robot development.
- Excellent in C, bash, Linux, rt-thread, version control and docker operation.
- Be familiar with software design, problem-solving and debugging skills.
- Experience on ROS and docker technique. STM32 based sensors implementation.

## PROFESSIONAL EXPERIENCE

2019.10 - present **Software architect, SAIC MAXUS, Shanghai**

Responsibilities: Software architecture design for next generation cockpit.

- OTA protocol maintenance and revision.
- CI/CD services deployment.
- Domain controllers' clock sync policy constitution.
- Multi-system running on single-core H/W scheme design.
- Software modules definition and architecture design for intelligent cockpit controller based on Qualcomm 8155.

2018.06 - 2019.09 **Senior System architect, Shanghai Yunshen technologies Co., Ltd. , Shanghai**

Responsibilities: robotic development

- Sensor development
  - rt-thread CAN driver implementation for STM32.
  - Ultrasonic, anti-collision, anti-falling sensors development.
  - Sensor's firmware upgrading over CAN method implementation.
- Robot control system
  - Package ROS running environment by docker image.
  - Integrate camera driver and CAN adapter driver into docker image.
  - ROS nodes for devices and applications implementation.
  - Build system image for x86.
  - Mikrotik router configuration.
  - FOTA function for X86 based controller implementation.
- System management
  - Docker registry server.
  - LDAP, Git, Gerrit, VPN and Jenkins server construction and management.
  - QoS configuration for ROS (Router Operating System).

- 2016.07 – 2018.05 **Senior Embedded Software Engineer, Shanghai clever mrobot technologies Co., Ltd. , Shanghai**  
 Responsibilities: Robotic development
- Android driver development
    - Rockwell 3288 BSP development.
    - System stability and charging system optimization.
  - Robot control system
    - Robot control system redesign.
    - Construct newly robot control system by ROS (Robot Operating System).
    - Porting robot control system from x86 to Nvidia TX1. Integrate OpenCV support into ROS.
- 2010.06 – 2016.06 **Embedded Software Engineer, Shanghai Phicomm. Inc., Shanghai**  
 Responsibilities: Mobile phone development
- Android Smartphone project
    - On Marvell PXA968 platform. Sensor driver and PMIC driver development.
    - Qualcomm MSM7x27/MSM8x25/MSM8x25Q platform. PMIC module development. Develop environment optimization: geomagnetic debug method optimization, TP fw upgrade method. Dual-way charging method implementation based on smb358. Batch review tool for gerit.
    - Qualcomm MSM8x10/8x12/8x26/8x16/8994/8909 platform. PMIC module, battery characterization.
    - Package all-in-one environment to a single self-uncompressable file for convenient quick setting for newbie developers under windows and linux.
    - Package Android compile environment by docker technique to standardize compile environment.
    - Optimize android compilation efficiency by using ditcc and ccache.
  - MStar and MTK feature phone development
    - MMI customization, SP porting for customer.
    - Scripting for auto release.
- 2009.10 – 2010.06 **Embedded software engineer, Shanghai iBingo network technology Co., Ltd., Shanghai**  
 Responsibilities: Develop dynamic theme and screen saver for feature phone (iShow theme system).
- Dynamic themes development for feature phone.
    - 3X3 style, Ring style theme.
    - Ribbon style screensaver.
    - Dandelion screensaver which can distinguish between daylight and night.
    - Scripting for auto release.
  - Optimize downloading efficiency.
- 2008.11 – 2009.10 **Embedded Software Engineer, Shanghai Dragontec Group, Shanghai**  
 Responsibilities: Japanese outsourcing job.
- Digital TV for Hitachi development.
    - UI implementation and bug fix.
    - Documents composing.
    - Coding and testing.
  - System porting from vxworks to Linux.
  - Openvg porting project.
    - Port opencv to SuperH platform for Hitachi television project.
    - Unit test cases.
- 2008.06 – 2008.11 **Java Engineer, Kyrocera Mita, Oosaka**  
 Responsibilities: Non-paper solution development for hospital.
- Controller module, Facade module and Storage module implementation.
  - Documents composing.
  - Coding and testing.
- 2007.05 – 2008.06 **Embedded Software Engineer, Hitachi ICS, Hitachi**  
 Responsibilities: Development of IVI for Cadillac CTS 08 and 09.
- iPod support functions development. In charge of maintenance of coreapp task and controller task.
  - Audio file header parser development.
  - Documents composing.

2006.07 - 2007.05 **Java Software Engineer, Nanking University Dragontec, Nanking**  
Responsibilities: Suntory vending machine online management system development.  
○ Constructing sql for operating databases under DB2 and PostgreSQL.  
○ Scripting for software release and deployment.  
○ Unit test cases.  
○ Documents composing.

## EDUCATIONAL QUALIFICATIONS

2002.09 - 2006.06 **BA of Traffic engineering, Hohai University, Nanking**

## LANGUAGE SKILLS

English CET4  
Japanese

Normal  
Normal

## TECHNICAL SKILLS AND KNOWLEDGE

	<div><div></div><div></div><div></div><div></div></div> basic knowlegde		<div><div></div><div></div><div></div><div></div></div> deepened expert knowledge
	<div><div></div><div></div><div></div><div></div></div> intermediate knowledge, some project experience		<div><div></div><div></div><div></div><div></div></div> expert/guru
	<div><div></div><div></div><div></div><div></div></div> extensive project experience		
C	<div><div></div><div></div><div></div><div></div><div></div></div>	Java	<div><div></div><div></div><div></div><div></div><div></div></div>
Kernel Driver	<div><div></div><div></div><div></div><div></div><div></div></div>	RT-Thread	<div><div></div><div></div><div></div><div></div><div></div></div>
Linux/Unix	<div><div></div><div></div><div></div><div></div><div></div></div>	Android BSP	<div><div></div><div></div><div></div><div></div><div></div></div>
Git/Repo	<div><div></div><div></div><div></div><div></div><div></div></div>	Docker	<div><div></div><div></div><div></div><div></div><div></div></div>
Bash	<div><div></div><div></div><div></div><div></div><div></div></div>	Python	<div><div></div><div></div><div></div><div></div><div></div></div>
Emacs	<div><div></div><div></div><div></div><div></div><div></div></div>	Vim	<div><div></div><div></div><div></div><div></div><div></div></div>
ΛT <sub>E</sub> X	<div><div></div><div></div><div></div><div></div><div></div></div>	Common Lisp	<div><div></div><div></div><div></div><div></div><div></div></div>
Router Operating System	<div><div></div><div></div><div></div><div></div><div></div></div>	Robot Operating System	<div><div></div><div></div><div></div><div></div><div></div></div>

## HOBBIES

Reading Technology, Novell

Sports Skate Board, F1, Marathon

## GRANTED PATENTS

201510477097.X 一种登录认证方法及系统  
201510612722.7 一种扩展移动终端运算能力的系统  
201410613796.8 一种移动终端及其虚拟光驱的实现方法  
201210368281.7 一种耳机接口装置及基于所述耳机接口装置的控制方法  
201510745100.1 一种密钥加密方法及系统、电子设备  
201210585845.2 硬件固件独立升级系统及方法  
201420615063.3 一种手机进水保护装置  
CN201811304800.7A 一种活动区域热力图的生成方法和服务器

## MISCELLANEOUS

3rd party **github**  
projects  
○ twip: Add proxy support.  
○ ChinaDNS-C: Fix bug and port to tomato.  
○ Koreader: Bug fix and compilation speed optimize.  
○ tmk\_keyboard: Add bluetooth support for usb2usb.  
○ RT Thread: Fix STM32F1 bsp bugs. Write CAN driver for Stm32f4 using hal library.

## Own projects **github**

- battery\_analyzer: Use spline method to generate battery SOC table.
- vim\_configs: Vim configure used for co-workers.
- ChameleonMini-rebooted: Add support for NTAG-213, 215, 216.
- battery\_analyzer: A tool that can auto sampling and calculate SOC table for battery.
- csr\_tool: Script which can dump firmware from CSR chips.
- Ultramanmedal: A lua script which can generate tags for zeta ultraman.
- bin2elf: Add elf header for bin file.
- wintoolset: An environment for running script tools under windows.
- trc2asc: Convert trc file which is saved by peak apps to asc file.
- asc2blf: Convert ASC to blf or blf to asc.
- exportdrawio: Export png svg pdf files from a drawio file.
- crackmfkey: Auto download sniff data from chameleon and calculate keys out.