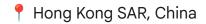**Chen Wei**

📍 Hong Kong SAR, China

✉ chen.wei@example.com | 📞 +852-9123-4567 | 🌐
linkedin.com/in/chenwei-embedded

Professional Summary

Innovative and results-driven Principal Software Engineer with over 12 years of experience in embedded systems, firmware development, and performance optimization across leading technology companies in China. Proven expertise in Embedded Linux, Android internals, device drivers, and low-level system architecture. Strong track record of enabling robust software ecosystems for RISC-based platforms and driving high-impact performance improvements in consumer electronics. Adept at system-level debugging, root cause analysis, and implementing robust solutions for complex embedded challenges. Passionate about staying at the forefront of embedded technology and contributing to cutting-edge advancements.

Technical Skills

Operating Systems: Embedded Linux (Yocto, Buildroot), Android (AOSP, HAL), Real-Time Operating Systems (RTOS)
Software Development: C/C++, Assembly (ARM, RISC-V), Python, Bash, Shell Scripting
Toolchains: LLVM, GCC, GDB, Yocto, Buildroot, Kernel Debugging Tools
Architecture: ARM (Cortex-A, Cortex-M), RISC-V, x86
Performance: System profiling (Perf, Trace), kernel tuning, boot-time reduction, memory optimization
Drivers & BSP: I2C, SPI, UART, GPIO, Power Management, PCIe, USB, Display Interfaces
Languages: Mandarin (Native), English (Fluent)
Methodologies: Agile, Waterfall

Professional Experience

OrionArc – Principal Software Engineer, Ecosystem Enablement | 📍 Hong Kong SAR | 2021–Present

- Spearheaded software stack enablement for new RISC-V SoCs across IoT and edge compute platforms, driving adoption of the architecture in key markets.
- Designed and optimized bootloaders (U-Boot, Barebox) and OS bring-up processes, reducing boot time by 35% and improving overall system responsiveness.
- Led cross-functional collaborations with hardware teams to align firmware with

evolving silicon features, ensuring seamless integration and optimal performance.
- Authored internal tooling for performance regression analysis and driver compliance checks, streamlining the development process and improving software quality.
- Provided technical leadership and mentorship to a team of junior engineers, fostering a culture of innovation and knowledge sharing.
- Contributed to the development of comprehensive software development kits (SDKs) and documentation for RISC-V platforms.

Xiaomi Corporation – Senior Firmware Engineer, Smartphone Platforms | 📍 Beijing, China | 2017–2021

- Owned HAL and kernel driver development for multiple flagship smartphone releases, ensuring timely delivery and high reliability.
- Contributed to AOSP customizations and secure bootloader implementation for Qualcomm-based SoCs, enhancing device security and protecting user data.
- Delivered critical power and thermal driver enhancements, extending battery life by 15% and improving the user experience.
- Mentored junior engineers and led weekly design/code review sessions, promoting best practices and improving code quality.
- Collaborated with QA teams to develop and execute comprehensive test plans, ensuring software stability and performance.
- Investigated and resolved complex software defects, utilizing advanced debugging techniques and tools.

Huawei Technologies – Embedded Software Engineer | 📍 Shenzhen, China | 2013–2017

- Developed firmware and BSP layers for networking hardware and consumer devices, supporting a wide range of products.
- Integrated and debugged Linux kernel modules and board bring-up procedures, ensuring proper hardware functionality and system stability.
- Conducted performance tuning on embedded systems, resulting in 20% throughput gains and optimizing system efficiency.
- Implemented custom compiler flags for optimized binary output on ARMv7 targets, improving code execution speed and reducing memory footprint.
- Participated in the design and implementation of real-time operating system (RTOS) solutions for specific hardware platforms.
- Provided technical support to hardware and testing teams during the product development lifecycle.

Education

Tsinghua University | 📍 Beijing, China

Bachelor of Science in Computer Science | Graduated: 2013

- Relevant Coursework: Operating Systems, Computer Architecture, Embedded Systems, Data Structures and Algorithms, Digital Signal Processing