Mahdi Sahebi

C/C++ Embedded Software Engineer

درباره من

Experienced Embedded Software Developer in medical and automotive industries. Proficiency in embedded C/C++ in device driver, testing and processing projects on OS and bare-metal platforms. Proven skills in developing on Xilinx ARM boards, Texas Instrument and microcontrollers and collaborated with hardware engineers. Successfully reduced memory consumption and increased execution speed by up to 40% in embedded systems. Adhere to the TDD, Git flow, and clean code practices and aware of consequences of bad design. Known for being structured, and teamwork with 5+ and multitasking ability.

تجربه‌های کاری

C/C++ Embedded Software Developer

Danesh | تیر ۱۳۹۸ تا حالا

Mentored and shared knowledge with junior developers for 3 years.
Designed a high-performance parallel processing mechanism on Zynq Ultrascale in baremetal, utilizing 4 A53 and 1 R5 cores, by implementing mutex and thread synchronization, achieving a 1.2us overhead.
Modernized a large project by implementing auction matrix, merge K sorted lists, RBT, bit arrays, STL data structures in C, all based on memory pool with O(1). Optimized efficiency, memory usage, and code size 40%.
Developed a low-latency middleware for receiving high speed data from small FPGA FIFOs through PCIe, achieved 1600MBps rate with zero data loss unit testing.
Designed a low-level HAL for peripherals(DMA, GIC, GPIO, UART, Ethernet), enabled cross-platform deployment across x86 (Linux and Windows), Bare-metal (Zynq, TI).
Built client, server applications using GStreamer, OpenCV for streaming H264 over WiFi on NVIDIA Jetson.
Engineered an N-Dimension data structure in a firmware for NAND-Flash, boosted data access by 4X via SPI.
Implemented Selective Sliding Window Flow in C(Zynq) and C++(Linux), ensuring secure and lossless communication without FIFO in an AXI-to-Ethernet connection and reduced 2000 lines of code.
Created 400 high code coverage Google test cases, ensuring reliable code and avoiding critical issues.
Significantly improved embedded debugging by developing 3 tools; testing, memory leak, overflow detection.

سوابق تحصیلی

علوم کامپیوتر (کارشناسی)

دانشگاه صنعتی سیرجان | ۱۳۸۸ تا ۱۳۹۲

اطلاعات تماس

تماس از طریق جابینجا

اطلاعات شخصی

سال تولد: ۱۳۶۹
وضعیت سربازی: پایان خدمت
وضعیت تأهل: متأهل

زبان‌ها

فارسی (زبان مادری)
انگلیسی (متوسط)

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مهارت‌های حرفه‌ای

. C . Linux . linear algebra . git . Parallel Programing . OpenCL . ++C
GTEST/GMOCK . lwip . arm . Multithreding . tcp/ip