

EMBEDDED SOFTWARE ENGINEER

Professional Summary

Results-oriented Embedded Software Engineer with three years' experience in analysis, design, development, testing and implementation of various embedded software systems. Strong desire to obtain a responsible and challenging Embedded Software Developer's position where my education and work experience will have valuable application

Skills

- Programming Languages: C, C++, Java, VHDL,
- Scripting: Shell, Python, Perl, MATLAB, HTML, C#
- Tools: Microsoft Visual Studio, ADB, QXDM, Trace32, LTE, ModelSim
- Peripherals: I2C, SPI, QSPI, UART

Work History

Embedded Software Engineer , 04/2017 to Current
Flowserve Corporation – Emeryville , CA

- Design and development on Qualcomm multiprocessor mobile computing platforms.
- Work closely with the hardware team developing low-level device driver software for solid-state storage devices.
- Optimize the storage drivers and boot loaders for performance and power consumption across multiple processors.
- Support the team with failure triage, system debug and customer support to implement and support new features in the storage driver.

C, C++ Embedded System Test Engineer , 04/2014 to 03/2017
Entegris, Inc. – Chandler , AZ

- RF system Level Performance Verification and validation: RF system validation through statistical performance assessment, SW and Hardware Build Verification Testing and stability testing.
- Setting up the test environment to have comparable RF data with specified accuracy and tolerance and measuring various performance parameters for Wireless Transceivers such as Tx Max Power, WFO, ACLR, EVM, SEM, Sensitivity, ACLR, Rx intermod, etc. at system level.
- Interfacing with cross functional teams for correlating the RF parametric data correlation, debugging and triaging Tools: QPST, QXDM, QSPR, Call Box, Spectrum analyzer, Signal generator.
- Test Automation and Scripting and production deployment: Developing and automating tests cases and scripts for large scale production testing of processor chips.
- Validation included modem and apps processor functional verification and performance measurement.
- Tools: Trace32, ADB, C#, Microsoft Visual Studio, Perl, Perforce.

Development Engineer , 07/2010 to 07/2011
Sciaky Automation – Pune, Maharashtra India

- Development of an extensive mechatronic design for a complete automatic assembly of an electric toggle switch to increase production efficiency Tools: PLC, pneumatic actuators, electronic circuit design, ladder programming, optical sensors Academic Projects Gait analysis using low power wireless module: (Graduate Final Project) Implementation of rotation-based routing protocol among on-body sensors to reduce the overall power consumption of the system for accumulating the motion data.
- Dynamic time Warping algorithm is applied as a feature classification technique to differentiate between human movements based on the motion data.
- An offline analysis is performed to corroborate the hypothesis and then an on-chip implementation is done for deployment.
- Tools: Arduino programming, NRF2401+, C, Java, MATLAB 16 Bit RISC Processor using VHDL: Created a fully synthesizable VHDL model of a 16-bit RISC processor which included designing Registers, ALU, Instruction memory, Data memory, Scratch pad memory and Instruction Set Architecture of 27 instructions with 4 addressing modes and 4 stage pipelining and Interrupt handling features Parametric Cache Simulator Design: Implementation of a parametric cache simulator modelling a memory hierarchy to calculate hit and miss rate for data and victim cache for data cache size, associativity, block size, write policy, victim cache changes.
- Measuring the tardiness of real-time video workload under LITMUS-RT: Patching of the Linux with LITMUS-RT and using shell and python scripts to measure the average tardiness of the video application to compare the performance of the real time GSN EDF scheduler algorithm to the Linux CFS scheduler for soft real-time video applications.
- Device Driver Development: Development of modules for Linux based character-device driver capable of echoing the received character and converting the letters to uppercase for communication on UART.
- The driver was emulated using QEMU emulator for a Bare-metal ARM processor and is a loadable kernel module.
- Courses Analog and Digital Communication, Analog Integrated Circuit Design and Networks, Embedded Systems, Real Time Operating Systems, Computer Architecture, Introduction to VHDL, Digital signal processing, Advanced Embedded systems.
- Wireless Sensor networks, Wireless Communications.

Education

Bachelor of Engineering : Electronics and Telecommunication , 2010
University of Pune -

Electronics and Telecommunication

Master of Science : Electrical Engineering , 2013
University of North Carolina at Charlotte - City , State
Electrical Engineering

Skills

Academic, Automation, C, C++, Circuit Design, Hardware, customer support, debugging, designing, Digital signal processing, drivers, Embedded systems, features, flash, functional, GSM, HTML, Instruction, Java, Languages, letters, Linux, MATLAB, Max, memory, C#, modem, Networks, Operating Systems, Peripherals, Perl, PLC, processors, Programming, Protocols, Python, real-time, Real Time, routing, scripts, Scripting, Shell, Spectrum analyzer, switch, TCP/IP, Validation, VHDL, video, Microsoft Visual Studio

Courses:

Analog and Digital Communication, Analog Integrated Circuit Design and Networks, Embedded Systems, Real Time Operating Systems, Computer Architecture, Introduction to VHDL, Digital signal processing, Advanced Embedded systems. Wireless Sensor networks, Wireless Communications.