

Aditya Tiwari

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PROFESSIONAL SUMMARY

Over 2 Years of relevant experience in system programming and 6 months of experience in CDAC's professional course in Embedded System Design. Seeking for a carrier opportunity to work in a learning and challenging environment where I can positively add value to the company and sharp my existing skills as well as learn new.

TECHNICAL SKILLS

Application Domain:	C, C++, OOPS, Design Pattern, Data Structure.
Operating System:	Linux
Tools and Utilities:	Gdb, Git, GNU Build system, Log4c logging Mechanism, locv/gcov code coverage tool.
Linux Kernel	Process Management, Signal Handling, Memory Management, Synchronization, Multithreading and Multi-Processing, System Calls and Process Address Space, Socket Programming.

TECHINICAL SUMMARY

- Experienced in **OS Development** and **Linux system programming** using c, Data structure, Shell scripting and Assembly language.
- Understanding of **Linux kernel Internals**. Hands on experience on Signal Handling, Scheduler and Process management module of Linux kernel. Intermediate in Memory management.
- Well acquainted with **test framework creation** for UT and FT. Used standard frameworks as well.
- Good Understanding of **Glibc, Musl-libc libraries**.
- Exposer to Linux Test Project (**LTP**).
- Strong in **Data Structures** and **Algorithms**.
- Intermediate in **C++** and **OOPS concept**.
- Familiar with tools and utilities like **GDB, GIT, SVN, GNU Build System**, Log4c logging mechanism, **lcov/gcov** code coverage tools.
- Knowledge of **Software Development Life Cycle (SDLC)** in agile model.
- Exposer to the development component linker, loader, GNU tools, ELF etc.
- Good Debugging, Analytical and Problem Solving skills.

WORK EXPERIENCE

HCL Technologies Ltd.
Software Developer

April 2016 to Present

Project: NEC HPC OS
Platform: Linux, CentOS
Language: C, C++, Shell Scripting, Assembly

Description:

Designing User Space Daemon for Hardware Resource Management of High Performance Vector Engine. Creation of user scheduler, memory managing, signal process and process managing units.

The aim is to manage the hardware resources such as CPU and memory of high performance OS-less Vector Engine (VE) architecture. This is accomplished using user space daemons on a Vector Host (VH) machine with off-the-self Linux Kernel on Intel x86 architecture. There are three such daemons viz. Pseudo Process (serves the system call request from a task running on VE), Process Scheduling Manager (Linux process scheduler ported into user space to schedule task on VE) and Memory Manager (managing the memory allocation to different task running on VE).

Role:

- Involved in Realization and Implementation of different system call behavior in accordance to new architecture.
- Design and implement Process Management Modules which involves Process Creation, Scheduling and Signal Handling.
- Porting of open source C library like Glibc and Musl-libc.
- Performed Unit Testing of Process Management modules like Process Creation, Scheduling and Signal Handling.
- Designed Functional and System Test case to ensure robustness of Process management related component of VEOS.
- Bug Identification and Fixing and various phases like FT, ST, LRT, CU and DGT to ensure robustness of VEOS.
- Guided junior members to learn about Development Process, Product Feature and Developed Modules.

Achievements:

- Awarded with Excellence award for the contribution in the project.

PROFESSIONAL CERTIFICATION

- Post Graduate Diploma in **Embedded System Design** from **Centre for Development of Advance Computing (CDAC) Hyderabad**, 2016.
- NPTEL Online certification in [Programming in C++](#) - IIT Kharagpur

ACADEMIC PROJECTS

Title : Sensor Based Online Restaurant Reservation System.
Platform : Embedded, Linux, Raspberry Pi, Android, Web Server
Description : Used Raspberry Pi board and ported Raspbian to create server. This server gets table and parking availability in Real-time from sensors and communicates with android app to provide various services like table booking, table availability, menu and home delivery.

Title : Line Follower Robot
Platform : AVR microcontroller, Embedded C
Description : The Line Follower Robot works on closed loop feedback algorithm where feedback from the line sensor is used by the controller for correcting the path of the robot.

EDUCATION HISTORY

Course Name	Institute/College/Board	Marks (%)
Post Graduate Diploma in Embedded System Design (PG-DESG)	CDAC - Hyderabad	60
Bachelor of Technology	H.R. Institute of Technology (UPTU)	64.8
Higher Secondary Exam	Kamla Nehru Institute of Child Education (CBSE)	64.8
Matriculation Exam	Maharishi Vidya Mandir (CBSE)	77.7

INTEREST

- Writing solutions on QA websites like [stack overflow](#).
- [Experimenting with the concepts](#) that I learn during work.
- Reading Books mostly related to category of productivity, time management and biography. Application of learned principles in daily life and work. Also spent time in reading technical books.
- Open source development.
- Recreational Running.