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Career Mission

- Having good knowledge as well as good experience on Kernel, Device Drivers and I want to grow in field of Linux Device Drivers.

Summary

- Currently working in **Sasken Technologies Ltd.** in field of Kernel, Linux Device Driver Developer.
- Having 6 months experience in **Vector India** as an Embedded Software Programmer.
- Good understanding and hands-on experience in **porting and fine-tuning** of Linux into different platform.
- Qualcomm based device **Board bring up** and kernel issues resolution.
- Proficient in **Qualcomm based Android system** software development
- Hands on experience in **Linux Operating System Internals, Linux Device Drivers**.
- Hands on experience in **Linux kernel Customization Build**, driver **integration**, managing different system images and flashing.
- Good programming skills **in c, c++, shell scripting** having capability to capture system information using Proc File System and utilities available.
- Hands on experience of **general and Android debugging tools** like git, GDB, adb, fastboot, minicom, cscope, printk, valgrind, Klocwork and several other tools.
- Dynamic and **positive attitude** towards work.

Technical Skills

Skills	Deep knowledge of C , Embedded C , C++ ,Data structure & Algorithms , git , microcontroller 8051,Linux System Programming , Linux utilities , Linux Operating System Internals , Linux Device driver . Communication protocol: UART, I2C, SPI.
Device Driver	System level programming , kernel level programming , char, device driver , file systems ,

	procfs, sysfs , ioctl, Interrupt s– workques , tasklets , synchronization techquies- atomic operation, mutex , spinlock , memory management , linux debugging .

Professional Project

Project	Emergency Shutdown
Description	Prevent memory corruption on abrupt power off by shutting down the system with reduced power off time. System to power off in less then 2 sec before the backup power goes off.
Role	• Writing a driver from scratch which registers for interrupt triggers on abrupt power off execute scripts to do – i- Send signal to modem stop, ii- Kill all daemons to stop access memory, iii- Sync and unmount the file system, iv- Shutdown the system. • Writing Device tree (DTS) node and update with GPIO pin number to detect Interrupt.

Project	Linux Porting on Qualcomm msm8996 device
Description	As a part of Android build, needed to upgrade Linux from 4.4 to 4.14 and board bring-up with Linux 4.14.
Role	• Understanding whole boot-up sequence and bring up board in same fashion. • Porting of drivers and making dtschanges. • Debugging kernel issues and working in CLI. • Kernel Customization build. • Compilation, managing Android full build and working on Android layers. • Working in Qualcomm Kdev environment. • Booting with various RootFS like Initramfs, Ramdisk. • Flashing images and sanity test.

Project	Telematics
Description	- Maintaining whole telematics boards(H/w) builds against static analysis issues. - Generating FOSSID report and fixing security CVE's. - Bug fixing for general issues.
Role	- Running static analysis Klocwork tool on source build. - Communication with different teams and passing on respective component issues to teams. - Merging and propagation of gerrits to respective branch and respective SI's. - Testing patches on local build against static analysis and sanity test. - Generation of FOSSID report. - Working on CVE's fix's and propagate changes to respective build's

Learning Projects

Project Name	Description
Designing GPIO driver for Raspberry pi Board	Developing GPIO driver with basic functions and doing **IOCTL**.
Linux Porting on SDM845	Porting and fine-tuning Linux as required and board bring-up with that image.
Designing C preprocessor	Design and development of C preprocessor trying understanding the compiler functions and difficulty level of design of those functions.

Education Qualification

Course	Institution	Board/University	Percentage	Year of Completion
Embedded System Design	Vector India	Vector India	-	2019
Bachelor of Engineering	S.G.Balekundri Institute of Technology	VTU, Belgavi	68%	2018
Higher Secondary	kendriya vidyalaya	CBSE	73%	2014
High School	kendriya vidyalaya	CBSE	8.6 CGPA (82%)	2012

Personal Details

Fathers Name	S.S. Mugali
Mothers Name	Jayashree Mugali
Date of Birth	21/04/1996
Address	C/O S.S.Mugali , Sahyadri nagar , Belgavi, Karnataka , 590019
Nationality	Indian
Languages Known	English, Hindi, Kannada
Hobbies	Watching and Playing sports (Boxing), Hanging out

Declaration:

I hereby declare that above information is correct to best of my knowledge and belief.

Place: Bangalore   **Date:**

Basava Prabhu