

GUNDOJU VIKAS CHARY	Phone: +91 8919345107 Email: gundojuvikaskumar@gmail.com
SUMMARY	<p>I aim to be a valuable asset to your company to excel with my ability to learn quickly, apply what I learn efficiently and love for challenging work. I have over 2.8 years of experience in field of Embedded Software engineering.</p> <ul style="list-style-type: none"> • Practical knowledge on C and Linux system programming. • Hands on working experience in C and Linux internals, Device Drivers, debuggers (GDB, Val-grind). • Good Exposure in Cross Compilation Tools for ARM. • Having experience in Compiling Kernel, Third-party tools, Libraries, and Applications as per system requirements. • Good knowledge on the Threads, process Management, Memory Management. • Good at IPC's i.e. FIFO, Shared Memory, Pipes. Knowledge on Semaphore, Mutex Locking mechanisms. • Requirement gathering and feasibility analysis. • Good knowledge on shell scripting • Experienced in using the GNU tool-chain for embedded software development.
EDUCATION	Keshav Memorial Institute of Technology (JNTU, Hyderabad) B Tech - Electronics and Communication Engineering <i>July 2022 Aggregate: 7.87 CGPA</i>
SKILLS	Programming Skills : C. Operating systems : Linux(ubuntu- 20.04) Scripting Languages : Shell Scripting Compilers : GNU C/C++(4.6.2 for ARM) Tools : Vim, Kermit , strace.
EMPLOYMENT	Linkwell Telesystems Private Limited <i>August 2022 - present</i> Project : GL11 Platform : (Software) Linux arm (Hardware) Freescale i.MX 6SoloLite EVK Board. Language : C Architecture Type : ARM Cortex A7 Tools Used : Vim , GCC C ross Compiler 4.6.2 (free-scale) U-boot Version : 2009.08 Kernel Version : 3.0.35 Domain : POINT OF SALE (POS) Device

Project Description :

POS machine is an embedded Linux device equipped with various hardware peripherals, each interacting with the system to support Public Distribution System (PDS) and Attendance applications. These applications authenticate customer bio metrics using either capacitive or optical fingerprint scanners or an iris scanner, with authentication requests being sent to the UIDAI server.

Role :

- Collaborated with the development team to acquire updated software builds.
- Develop a comprehensive list of test cases based on the identified modifications in the software build.
- Conduct thorough testing of peripheral functionalities using the updated software builds in alignment with the prepared test case list.
- Deliver detailed test reports to the development team for review and supporting iterative improvements.
- Developed and deployed an application to upload POS machine data, including machine ID and FPS ID, to an FTP server on a scheduled 7-day cycle, ensuring reliable and timely data synchronization.

Project : **AutoAPN (Service)**
Platform : (Software) Linux arm
(Hardware) Freescale i.MX 6SoloLite EVK Board.
Architecture Type : ARM Cortex A7
Language : C,Linux
Tools Used : Vim , GCC Cross Compiler 4.6.2 (free-scale)
GSM Module : SIM 7600 ,SIM 5360, SIM 800H , GL 865.
Domain : POINT OF SALE (POS) Device.

Project Description :

AutoAPN application facilitates internet connectivity and GPS services for POS machines. Users can select their preferred communication mode Ethernet, WiFi, Bluetooth tethering, or GSM(2G/3G/4G) based on availability via a desktop icon, with GPS functionality remaining consistent across all modes. The application enables interaction between the GSM and GPS modules to capture NMEA data, which is then processed to extract precise GPS coordinates, including latitude and longitude.

Role :

- Functionality of the SIMCOM 8200 5G module was tested using AT commands for verification and performance assessment.
- Developed an **Adaptive Network Switching** feature in the **AutoAPN application** using **POSIX threads** and signals to dynamically switch between available communication modes based on network conditions.
- Developed a **half-duplex serial communication application** to enable the POS machine to function as a **USB hub** for efficient peripheral connectivity.

Project	:	Power Management Application(Service)
Platform	:	(Software) Linux arm (Hardware)Freescale i.MX 6SoloLite EVK Board.
Language	:	C,Linux
Architecture Type	:	ARM Cortex A7
Tools Used	:	Vim , GCC Cross Compiler 4.6.2 (free-scale)
Domain	:	POINT OF SALE (POS) Device

Project Description :

Implemented power management service to suspend device to RAM , which will reduce the power consumption of POS device when the device is an idle condition and enabled wake-up source on keypad and power key. This service will offer services like when device go to sleep and when to wake-up based applications request. applications services are given by using UNIX socket communication.This service provide lock and unlock and wake-up timer using SOC RTC .

Role:

- Conducted battery consumption analysis on the POS device with and without the power management service enabled.
- Designed and implemented an application to log POS device battery voltage levels from the standard sysfs path to a text file at hourly intervals, including timestamps and date-based file naming for efficient data tracking