KOTHAPALLY AJAY KUMAR

Mobile: 9550274837

Email id: ajaykumarembedded@gmail.com

Address: Langer house, Hyderabad, India, 500008.

Career objective

To pursue a challenge and satisfying career in the industry and to be a part of a progressive organization that gives me a scope to enhance my knowledge and skills in order to cope with the latest technological changes.

Professional Summary

- Presently Working in Innominds as a software Engineer.
- Worked as an Engineer in **INTEL** on behalf of **Innominds**.
- Worked as an Embedded Software developer in **Techsperts Software Solutions** PVT LTD.

Professional Skills

- Having good exposure on Low power Audio codec drivers (Device Drivers) in Kernel device drivers.

- Knowledge on Android Audio Framework, Audio policy Manager, Audio Flinger, Audio HAL.

- Audio/ALSA Drivers, Machine, codec, platform and routing drivers.

- Good Expertise in Android and Kernel.

- Expertise in first level of debugging and analysis of issues.

- Good understanding of OS concepts such as multi-threading, process management, IPC mechanisms

- Embedded System - Good Knowledge in Embedded Linux, custom Linux OS and software integration.

- Boot loader and kernel development, ARM targets and Atmel microcontrollers.

- Cross compilation tool chains and Linux programming (Android, Build root)

- **Programming Skills**: C, Linux system programming.

- OS Platforms: Ubuntu Linux on x64. Protocols: UART, I2C, SPI.

- Browsing and version control Tools : C-tags and GIT/REPO

- GNU/Linux Tools – gcc, make, gdb, adb.

- Debugging tool : Trace32

- Project - Agile & Scrum methods.

Project Profile

1. Porting on Apollo Lake Platform:

- **Role** : Team Member
- **Team size** : 4
- **Platform** : **Apollo Lake**
- **Environment** : **C, Linux, Device drivers, CAVS Audio drivers.**
- **Tools** : Intel Platform tool, Intel Topology Tool (ITT).

Description:

- There are two types of drivers in Linux kernel, Legacy audio drivers and ASoC drivers. CAVS driver supports ALSA framework, ASoC features and DSP enabled. CAVS drivers are used in GP projects and chrome projects.
- ASoC consists of three components, codec, machine and platform drivers. Codec represents hardware codec controlled by codec driver. Machine represents how platform and codec are connected controlled by Machine driver. Platform represents the hardware controller eg.cAVS controller including DSP controlled by platform driver.
- Part of developing and porting features on different platforms and different kernel versions. Some of the issues are resolved by me.
  1. HDMI Audio is not working properly on Apollo Lake NUC.
  2. ASoC no backend DAIs are enabled on GP MRB Board.

Responsibilities:
- Board bring-up.
- Handling different types of issues/bugs, capturing logs and analysis of logs.
- Attended scrum meetings every day.

2. Porting and Feature development of Low Power Audio Codec

- **Role** : Team Member
- **Team size** : 6
- **Platform** : OMAP
- **Environment** : C, Linux, device drivers, Audio drivers.
- **Tools** : ARM linux tool chain, Trace32.

Description:

- Low power audio codec is an ultra-low power stereo audio codec which supports multiple sampling rates 8 KHz to 192 KHz and multiple bit formats like 16, 20,24,32bits.
- This codec is targeted to design and implement dynamic and efficient audio power management for individual widgets like speaker, headset, microphone, mixer, ADC, DAC and PGA.

- Codec has two fully programmable mini DSP are implemented to suppress the noise and filtering the audio for digital audio processing in recording and playback the stream.
- I2S and PCM are used for digital audio interface.
- Part of developing and porting features on different platforms and different kernel versions. Features like
  1. Headset detection enabling functionality.
  2. Reduce pops and clicks.

Responsibilities:
- Developing code as per the requirement.
- Board bring-up.
- Handling different types of issues/bugs.
- Attended scrum meetings every day.

Strengths

- Strong aptitude towards learning new technologies
- Technology-driven individual committed to excel and adapt to a dynamic environment.
- Have a strong attention to detail and clarity of thought with a passion to execute.
- Highly dedicated and self-motivated to deliver value to the organization.

Qualifications

- **M.Tech** in Embedded Systems from Vardhaman college of Engineering, Hyderabad.
- **B. Tech** in Electronics & Communication Engineering from Mahaveer Institute of Science &Technology, Hyderabad.
- **Intermediate** from Sri Chaitanya junior college, Vijayawada.
- **SSC** from A.P.R.School, Enkoor.

Declaration

I hereby declare that information is correct, up to my knowledge and I bear the responsibility for the correctness of the above-mentioned particulars.

Date: 14-06-2020   yours sincerely,
Place: Hyderabad.   K.AJAY KUMAR.