VIKAS GUPTA

EMBEDDED SOFTWARE ENGINEER

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SUMMARY

Detail-oriented and skilled Embedded Software Engineer with over 3 years of experience in Android kernel development, device driver modification, and integration. Proficient in USB, Bluetooth, and other communication protocols. Seeking a challenging position to utilize my skills in embedded systems, debugging, and software development for innovative projects.

EDUCATION

Bachelors of Technology (Electrical & Electronic Engineering)
VIT UNIVERSITY , CHENNAI *Jul 2016 - Jul 2020*
CGPA: 8.3

SKILLS

- Programming Languages: C
- Embedded Systems: Linux kernel, Linux device drivers, Embedded OS, RTOS, Android kernel
- Communication Protocols: USB, Bluetooth, Wi-Fi, PCI, UART, SDIO, I2C, SPI
- Debugging Tools: Renesas, Saleae, JTAG, Beagle, Apple Test System, Serial Wire Debugger
- Technical Skills: Reviewing HSIs, datasheets, schematics, GPIO interfacing, Device Tree
- Technical SkillShell Scripting: Proficient in writing and debugging shell scripts
- Version Control & Tools: Git, Jira, RTC
- Processors: ARM Cortex-A
- Platforms: Qualcomm 8155, Qualcomm 6155, MediaTek
- Testing Tools: iperf (for Wi-Fi performance testing)

EXPERIENCE

Embedded Software Engineer
VISTEON *Jan 2021 - Present*

- Focused on Android kernel development, including modifying and integrating device drivers to meet project requirements.
- Modified drivers for USB, Bluetooth, Wi-Fi, PCI, UART, SDIO, I2C, and SPI communication protocols within the Android kernel environment.
- Applied debugging skills to resolve issues in USB, media, Android Auto, CarPlay, and UART functionalities.
- Demonstrated proficiency in C, DSA, Linux kernel, embedded OS, Linux device drivers, RTOS, and Android kernel.
- Worked extensively with ARM Cortex-A processors.
- Reviewed HSIs, datasheets, and schematics; interfaced peripherals using processor GPIOs.
- Worked on Qualcomm 8155 and 6155 platforms for OEMs including Mahindra, Harley Davidson, and Royal Enfield.
- Gained hands-on experience with MediaTek platforms for OEMs like Tata and Skoda.

Intern
VISTEON *Oct 2020 - Dec 2020*

- Learned flashing of software Android images and VIP images using QFIL tool.
- Utilized Renesas Debugger for detailed debugging.
- Captured various levels of USB drive logs including error, warning, and verbose.
- Interacted with Android console and QNX console over UART using Tera Term.
- Performed flashing of Android partitions using Fast-boot.
- Interacted with Android console using ADB tool, including pulling and pushing files.

Intern
Oil and Natural Gas Corporation (ONGC) *May 2019 - Jun 2019*

- Gained hands-on experience in oil exploration and drilling operations.
- Assisted in various tasks related to drilling and exploration activities.
- Acquired knowledge of industry practices and safety procedures in oil extraction.
- Engaged in electrical maintenance work and operational tasks at a power substation.
- Assisted in the upkeep and troubleshooting of electrical systems.
- Gained practical insights into the functioning and maintenance of electrical infrastructure

PROJECTS

- **Android Kernel Development on Qualcomm Platforms**
  Worked extensively on Qualcomm 8155 and 6155 platforms for OEMs including Mahindra, Harley Davidson, and Royal Enfield. Involved in modifying and integrating Android kernel drivers, optimizing kernel performance, and resolving platform-specific issues.

- **Android Kernel Development on MediaTek Platforms**
  Hands-on experience with MediaTek platforms for OEMs like Tata and Skoda. Engaged in developing and debugging Android kernel drivers, optimizing system performance, and ensuring compatibility with OEM requirements.

- **Automation Test Scripts for Qualcomm Platforms**
  Developed and maintained automation test scripts to test various aspects of USB, CarPlay, I2C, SPI, and UART on Qualcomm platforms. Ensured the robustness and reliability of these interfaces through comprehensive testing and debugging.

- **Wi-Fi Performance Testing**
  Utilized iperf tool to measure and analyze Wi-Fi performance, ensuring optimal connectivity and data transfer rates for embedded systems.

- **College Project: Garbage Collector**
  Developed an embedded system for detecting and collecting garbage using an ultrasonic module to detect trash and a servo motor to place it in a bin. Integrated a camera to differentiate between trash and non-trash items, enhancing the system's efficiency in sorting and managing waste.

HOBBIES

Travel
Cooking
Badminton
Working Out
Reading Articles and News
Social Work