DEEPIKA JASSAL

SOFTWARE Engineer

A dynamic and skilled Computer Science professional with **over 3.10 years** of work experience and a strong background in Computer Programming,Device Driver,Modem Bring up, DevOps,Sensor Driver. Targeting a challenging role to leverage the skills and expertise in the optimal future growth of an organization.

CONTACT

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EDUCATION

2021
Masters of Technology (CSE)
from Malaviya National Institute of Technology, Jaipur | Grade: 76.80%

2017
Bachelor of Technology(IT)
from Raj Kumar Goel Institute of Technology,Ghaziabad| Grade:77.20%

2013
Intermediate
From Rose Bell Public School, Ghaziabad |Grade:85.80%

CORE COMPETENCIES

- Driver Development
- DevOps
- Troubleshooting
- Debugging
- Automation
- Project Management
- Data Analysis
- Performance Optimization
- Security Integration
- Data Structures & Algorithms

PROFILE SUMMARY

- A highly skilled and accomplished Device Driver Developer and C++ Developer with a strong background in designing and implementing modem features for Android devices on MTK chip-sets
- Experienced in debugging and troubleshooting Java, C, and C++ code to resolve complex issues related to communication protocols; expertise in analyzing modem logs and conducting performance analysis to optimize power consumption and enhance user experience
- Skilled in device driver porting and proficient in implementing data structures and algorithms in C++ for optimal performance. Designing, developing, and maintaining applications and software components; collaborating with cross-functional teams to define software requirements and specifications
- Implementing data structures and algorithms in C++ for various software functionality. Conducting code reviews, debugging, and troubleshooting to ensure code quality and performance
- Participating in the integration and testing of C++ modules within larger software systems; adhering to coding standards and best practices for efficient and maintainable code
- Implemented automated build and deployment pipelines with Jenkins, reducing manual errors and enhancing the efficiency of the software development life cycle. Proficiency in C++ programming language and object-oriented design principles; strong understanding of data structures, algorithms, and software development methodologies
- Experience in device driver porting,modem bring-up, planning, and implementation, ensuring standards for Android phones on MTK chip-sets
- Proficiency in test case design and execution; analytical skills to identify, document, and track software defects; understanding of software development life cycle and QA best practices
- Familiarity with version control tools like Git, Gerrit, and Jenkins for collaborative development; maintaining Gerrit code review system to facilitate efficient code collaboration. Implemented security measures to restrict access rights to specific user types, ensuring data integrity and code security. Managed code uploads and maintenance received from vendors, ensuring seamless integration and quality control

ACHIEVEMENTS

- Two-time Star Award winner for resolving issues ahead of time and contributing to the DevOps team's success
- Secured the second position in Intermediate/ Matriculation State Board Exams among a batch of 500 students
- Contributed to the successful release of high-quality software products meeting industry standards.
- Implemented effective testing strategies that improved software reliability and reduced defects

WORK EXPERIENCE

MediaTek India Technology Pvt. Ltd (payroll-Mobiveil Technologies) Noida

TECHNICAL SKILLS

- C/C++
- Java
- Shell Scripting
- Python
- ELT Tool
- Device Driver
- Modem Meta
- SN Writer
- Gerrit
- Jenkins
- Android Studio
- Git
- SPI/I2C/UART
- Windows/Linux
- Android
- ONE Simulation

PERSONAL DETAILS

Languages Known: English, Hindi

Software Engineer **June'24 – Present**

Key Result Areas:

- Worked on Android migration, porting I2C/SPI drivers for Android-based SoCs, modifying kernel driver implementations, adapting Device Tree (DTS/DTSI) configurations, and ensuring seamless communication between the SoC and peripherals such as sensors, EEPROMs, and touchscreen controllers, while maintaining compatibility with the updated Android framework and kernel changes
- Implemented a Kleaf-based Bazel build system for compiling Android 15 kernels with MTK specific drivers, kernel module dependencies to streamline driver integration and optimize build performance
- Implemented polling-based mechanisms for I2C drivers in Android-based SoCs, optimizing I2C/SPI communication by introducing non-blocking polling loops, configurable timeout handling, and efficient CPU utilization strategies, ensuring reliable and efficient peripheral interaction
- Fixed customer-specific bugs and implemented custom requirements for MTK products
- Debugged and optimized hardware reboot issues, driver load failures, build errors, and Coverity-detected defects

Lava International Pvt. Ltd. **Noida**

Design Engineer (Software Engineer) **Feb'21 – June'24**

Key Result Areas:

- Successfully brought up modems and implemented modem features for Android phones on MTK chip-sets(MT6761,MT6765,MT6762, MT6769)
- Implemented support for 4G networks and enhanced network connectivity features. Worked on privacy enhancements such as one-time permissions and scoped storage to improve user data security. Developed features using Android 11's bubbles API for improved messaging and multitasking
- Developed applications targeting the Material You design language for a more personalized user interface. Worked on performance improvements using Android 12's performance class and app start up improvements
- Developing applications for the latest version of Android to leverage its new features and enhancements. Exploring and implementing Android 13's improvements in performance, call drop/mute, and resource efficiency. Utilizing the latest user interface and design elements introduced in Android 13
- Developed custom features for Android phones, enhancing functionality and user experience. Designed and implemented a quick setup for internet-enabled functionality, simplifying the process for users
- Fixed XTS/Functionality/Reliability related issues for smart-phones
- Analyzing modem/Sensor/fingerprint logs to optimize functionality for mobile devices; effectively addressing network delay issues associated with SIM cards, enhancing communication efficiency and user experience
- Collaborated with external vendors to acquire essential software components, including downloading code on AWS, libraries, and dependencies required for project development
- Worked closely with cross-functional teams to resolve merge conflicts, address technical debt, and streamline the software development process
- Analyzing Gerrit logs to optimize functionality for code uploading process; effectively addressing data lose issues associated with Code uploading, enhancing communication efficiency and user experience
- Worked as part of a team utilizing Git, Gerrit, and Jenkins for version control, code review, and continuous integration in a fast-paced development environment
- Debugging and troubleshooting Java, C, and C++ code to identify and resolving issues effectively; implementing data structures and algorithms in C++ for optimal modem performance
- Leading the implementation of automated build and deployment pipelines with Jenkins, reducing manual errors and enhancing the efficiency of the software development life cycle
- Successfully integrating security patches into the company's software products, ensuring robust protection against potential vulnerabilities and threats