Ritik Sharma

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Work EXPERIENCE

**September 2024 – Present**  
**Software Engineer, Embitel Technologies**

At Embitel Technologies, I have worked extensively with SPI and I2C communication protocols, including configuring SPI for efficient device communication. I developed code for PMIC SPSB100 versions BA and CA, ensuring optimal functionality and reliability. Additionally, I designed and implemented unit testing frameworks to achieve comprehensive Line Coverage (LC), Function Coverage (FC), etc. My role also involved me working with QNX and Linux operating systems, contributing to the development of robust and efficient software solutions. Understanding of the QNX. Microkernel architecture, and developing mock components for component testing over CPP.

**September 2023 – September 2024**  
**Software Engineering Trainee, Embitel Technologies**

**Internship Experience**

**August 2021 – September 2021**

**Software Engineer Intern, *Defense Research and Development Organization (DRDO)***

Developed a Traffic Light Controller algorithm to optimize traffic flow on a 4-double-lane road system. Programmed FPGA boards for real-time traffic management, ensuring balanced traffic distribution. Gained experience in software development, FPGA programming, and system design.

education

# BTech (Electronics and Communication), UIET KURUKSHETRA

2019 – 2023

Projects

**Traffic Light System for Blind People**

Designed and developed a traffic light system to assist visually impaired individuals in safely crossing roads.

**Traffic Light Controller Algorithm**

Developed a Traffic Light Controller algorithm to optimize traffic flow on a 4-double-lane road system using FPGA technology.

**RFID door locking system**

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| SKILLS | TECHNOLOGIES & TOOLS |
| OBJECT-ORIENTED PROGRAMMING (OOPS) | DLT LOG VIEWER  TRACE32(FOR DEBUGGING AND FLASHING)  LAUTERBACH |
| EMBEDDED SYSTEMS | EB TRESOS (MCAL CONFIGURATION) |
| REAL-TIME OPERATING SYSTEMS (RTOS) | PARASOFT (UNIT TESTING) |
| MULTITHREADING & IPC  CLASSIC AND DYNAMIC AUTOSAR | SYSTEM DESK AND ARCHE (COMPONENT MODELING) |
| COMPLEX DEVICE DRIVERS | SDLC (AGILE AND V-MODEL) |
| UNIT TESTING & DEBUGGING | MOMENTICS IDE |
| LINUX & QNX |  |
| SPI, I2C and UART PROTOCOLS |  |
| PMIC DEVELOPMENT |  |
| C, C++, SQL PROGRAMMING |  |
| ALGORITHMS & DATA STRUCTURES |  |
| GITHUB & VERSION CONTROL |  |
| SHELL SCRIPTING |  |
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