

# Shivam Kumar

## Software Development Engineer II

An accomplished Embedded Software Engineer with **4 years** of experience in embedded software design and development. Ability to work in an agile, iterative development environment with in-depth knowledge of **C, C++, Linux, Data Structures, Algorithms, IPC, RTOS, Device Drivers and Serial Peripherals**.

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## WORK EXPERIENCE

### Software Development Engineer II Infinera, Bengaluru, Karnataka

07/2020 - Present

#### Tasks

- Developing an application software to integrate digital protection switch for ongoing traffic in telecom system using **C++**.
- Implemented an algorithm to establish end-to-end acknowledge based **Synchronised Communication** between APU and RPU.
- Developed a full cycle of **RTC Watchdog Timer** to handle all the case scenarios.
- Implemented features in the Real-Time multi-processor domain on an **RTOS** system (FreeRTOS).
- Wrote optimized and performant code, and proficiently debugged and profiled **multi-threaded applications**.
- Developed a lightweight application that parallelly operates in run time environment to monitor RPU Firmware health.

### R&D Engineer

Tejas Networks Ltd., Bengaluru, Karnataka

09/2018 - 06/2020

#### Tasks

- Developed and Debugged software application for telecom products on Linux Operating Environment using **C** and **C++**.
- Performed **Device Driver** development for embedded control peripherals like **I2C, SPI, PmBus, Flash** and **UART**.
- Developed **EEPROM** and **In-System** programming for controller and line cards.
- Developed code fixes and enhancements for inclusion in future code releases and patches.
- Developed an integrated embedded Linux interface to connect software application layers.
- Optimized code by rewriting many modules.

## EDUCATION

### Post Graduate Diploma (PG - DESD)

Center for Development of Advanced Computing (CDAC - ACTS), Bengaluru

2018

Grade: A

Stream

- Embedded System Design

### Bachelor Of Technology (B. Tech)

Dr. A.P.J. Abdul Kalam Technical University, Lucknow, Uttar Pradesh

2013 - 2017

Stream

- Electronics & Communication Engineering

## SKILLS

Proficient in C and C++ programming

Programming and Debugging in the Linux Operating Environment

Multithread as well as Asynchronous Programming

Firmware Design with Real-Time Operating System (RTOS)

Linux Device Drivers Development

Embedded Control Peripherals - Flash, UART, I2C, PmBus and SPI

Real-Time Multi-Processor Development

Possess Knowledge of Data Structures & OS Concepts

Knowledge of Software Design Patterns & Modern Coding Principles

Working Experience in R&D Environment

Decisive in Taking Decisions

Complex Problem Solving Skills

## ACHIEVEMENTS

★ Won 8 Robotics Competitions, organised by various Engineering Tech Societies.

★ Secured the ISIE Future Award in Electric Vehicle Championship (ESVC-2K17), organised by the Imperial Society of Innovative Engineers (ISIE).

★ Received Special Appreciation Award from A.K.T.U. University for making Inordinate Procure Vault (IPV) and Device for Uniquely Abled (DUA).

## LANGUAGES

English

Full Professional Proficiency

Hindi

Native or Bilingual Proficiency

## INTERESTS

Solving Rubik's Cubes

Computer Games

Playing Chess

Robotics