

SHUBHAM SINGH

Email: shubhamkumar191@gmail.com

Phone Number: +919023455482

OBJECTIVE

My goal is to become associated with a company where I can utilize my skills and gain further experience while enhancing the company's productivity and reputation.

PROFESSIONAL SUMMARY

- Installation of **Fedora, Ubuntu, Debian**, windows with create multi boot and also brief knowledge of BIOS setup.
- Good in Embedded **C, C programming** and able to implement and use **Data Structure** in C.
- **Shell scripts** using bash, run and control scripts.
- Understand and develop **Makefile**.
- Comfortable with Inter Process Communication by using **Pipes, FIFOs, Message Queues** and **Shared Memory**.
- Comfortable with Synchronization Mechanism: Semaphore, **Mutex**, and **Spinlock**.
- Good understanding about the concept of **Threads** and their implementations.
- Good understanding about the **Socket programming** in Linux.
- Beginner with C++ programming using Eclipse.
- Comfortable with python.
- Good understanding about the following Linux concepts.
 - Process Management and Scheduling.
 - Memory Management: Memory management unit (MMU), Segmentation, Paging, Swapping.
 - File I/O.
 - Signals.
 - System calls.

TRAITS

- Self-motivated, Quick Lerner, Hard Working.

KEY SKILLS

- Programming language: Embedded C, C, C++, Shell scripting.
- Socket programming.
- IPC Techniques.
- Development tool: RCS, Makefile.
- Operating system: Fedora (Linux 14.15), Windows, Ubuntu, Debian.
- Cross Compilation Process for Linux and Android.
- Kernel Compilation.
- Device Driver Development.
- Debugger: gdb.

PROFESSIONAL EXPERIENCE

L&T Technology Services Limited (Senior Engineer- Embedded System & Platform SW) (November 2021 - Present)

- Currently I am working on Dispensing System for US client in which we are using ethernet communication protocol, RTOS, Android compilation and customisation of version 10 and also using hardware communication protocol for controlling sensors, pumps, valves.

LIMITLESS MOBILITY SOLUTIONS PRIVATE LIMITED (Embedded Engineer (R & D)) (September 2018 to November 2021) (3 year 2 months)

- I have worked on multiple products Vending Machine, Vending cooler weighing machine, and GPS tracker on the software part as per our requirement also worked on the python for making attendance system with storing all the employee data on the database with including temperature.
 - Communication protocol (SPI, I2C, UART, USART, MQTT (paho_mqtt3c), HTTP (CURL)).
 - AES (ecb_128) encryption and decryption.
 - Json Parse, threads, GPIO handling, microcontroller programming (ATMEGA2560, ATMEGA328), different ARM board and EC25.
 - Checksum and CRC is used for data validation.
- I have also worked on the Cross Compilation process (Android kitkat 4.4.4) and Linux kernel (3.4.y) for ARM (Cortex-A9), and LTE (SC20) quectel board.
 - Flash Image to SD card.
 - Flash Image to EMMC.
- GPS Tracker device in which my role is read and send data of GPS location, Battery status, through TCP, GPIO controlled some features.

EMBLAGIC RESERCH AND COMPETENCY DEVELOPMENT LABS (Trainee Engineer) (January 2018 to August 2018) (8 Months)

- Character device driver development
 - This project aims writing a character device driver with creating the Simple Character Utility for Loading Localities (SCULL).
- Client-Server communication using Sockets and threads:
 - Client-server architecture using THREADS and SOCKETS in which multiple clients can access the server at the same time with the help of threads. • Using AF_UNIX and PF_INET for process communication domain.
 - SOCK_STREAM Communication style and default protocol is used.
 - Each thread for the client creates its child process that processes the client request and returns result to the parent thread, fork () and exec () system calls are used for achieving this.
- Client Server communication using Inter Process Communication: (using PIPES, FIFO, MESSAGE QUEUES or SHARED MEMORY)
 - Implementing a Server Program where some clients (requesting clients) would send a request to the server and the server would further find the appropriate client (processing client) to send the result.
 - Server read the request from the client by using MESSAGE QUEUES.

- Server creates a child process for each processing client by using fork () to process the process request.
- Multiple Data Compression and Encryption using iterative techniques
 - Compressing the textual data to reduce the size of the file and encryption of the compressed file so that unintended users cannot understand it.
 - Creating a master array that contains a unique character.
 - By using bit manipulation characters are encoded and decoded.

Education

- BTECH (2018) from Guru Teg Bahadur Khalsa Institute of Engineering and Technology Chappianwali, Malout with aggregate 74%.
- Intermediate (2013) from Naga Ji Saraswati Vidya Mandir Senior Secondary School Maldepur, Ballia with aggregate 69%.
- Matriculation (2011) from Naga Ji Saraswati Vidya Mandir Senior Secondary School Maldepur, Ballia with aggregate 9.4 CGPA.

Hobbies

- Playing Cricket, Watching movies.

PERSONAL INFORMATION

Name	Shubham Singh
Father's Name	Ajay Singh
Gender	Male
Contact No	+919023455482 ,+917704871318
Email	shubhamkumar191@gmail.com , shubhamkumarr191@gmail.com
Permanent Address	Bhrigu Nagar Satani Sarai, Ballia, Uttar Pradesh(277001)
Current Address	Nagavara, Bangalore,Karnataka (560045)
Marital Status	Unmarried