

JOB OBJECTIVE

Passionate and dedicated aspiring Systems Software Engineer with a focus on Embedded System Software Engineering. Pursuing an entry-level engineering position to leverage technical expertise and contribute to innovative projects driving positive change and advancement.

CONTACT DETAILS

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🏠 [GAURAVLAK](#)

IT SKILLS

- Linux System Administration
- C, C++, Python Programming
- Character Device Driver Development.
- Shell Scripting
- Linux System Programming
- Debugging with gdb
- Network Programming
- Development Tools: make, makefile, RCS, CVS, git
- Linux Device Architecture
- Network Protocols: UDP, TCP

AREAS OF EXPOSURE

- Embedded Software Programming
- Embedded C
- Embedded Linux
- Design and Development
- Shell Scripting
- Debugging and Testing
- Software Development
- Internet of Things

EDUCATION

- B.Tech. in Information Technology from Indraprastha University, Delhi, 2022
- 12th from Hansraj Model School, CBSE, Delhi, 2018

SOFT SKILLS

- Decision Maker
- Team Management
- Motivation
- Communication
- Leadership

PERSONAL DETAILS

Date of Birth: 20th September 2000

Languages Known: English and Hindi

Address: 11B, Single Storey Ramesh Nagar, New Delhi -110015

GAURAV LAKHINA

ASPIRING SYSTEM SOFTWARE ENGINEER

PROFILE SUMMARY

- Developed a Character Device Driver, establishing proficiency in Linux system programming and debugging with gdb.
- Engineered a server with hyper-threading capability, managing around 1000 threads, where each thread caters to an individual client, establishing connections and addressing client requests via stream sockets.
- Designed an Inventory Management System for a Library, highlighting skills in data structures implementation.
- Implemented Client-Server Communication using IPC techniques on Linux, emphasizing the skill to optimize data transfer and resource sharing.
- Engineered a solution for Multiple Data Encryption and Compression using an Iterative Technique, underscoring the skill to enhance security and optimize storage.
- Excelled in programming languages C, C++, and Python, with a concrete understanding of implementing Data Structures effectively.
- Mastered Shell Scripting with Bash Shell and Proficient in development tools like make, makefile, RCS, CVS, and git.
- Currently undergoing training on block driver development and board bring-up for the OLinuxinoA13 Board as part of ongoing projects.
- Actively engaged in training focused on the Raspberry Pi 4 (RPI 4) board, enhancing skills in hardware interfacing and embedded systems, and successfully pinged the board using TFTP for network communication tasks.
- Showcased expertise in Linux Internals, Network Programming, Linux Device Architecture and Device Tables.

TRAINING (ACADEMICS)

Trainee Engineer at EmbLogic.

September, 2022

Linux Character Device Driver Development

- Initiated driver and allocated necessary resources for device interactions.
- Registered driver with the operating system using insmod command.
- Used synchronizing techniques like spinlock and waitqueue.
- Implemented read and write operations for data transfer between device and user-space applications.
- Tested a sample application with driver.
- Performed IOCTL operations.
- Ensured robust error management to prevent system crashes and data corruption.
- Cleaned up and unregistered driver from the system using rmmmod command when no longer needed.

Client Server Communication using Sockets on Linux

- Created sockets for both client and server.
- Established connection between client and server.
- Enabled bidirectional data transmission once connected.
- Managed socket termination to prevent resource leaks.
- Implemented robust error control to address network issues or unexpected events during communication.

Inventory Management for a Library

- Created data structures to represent books, periodicals, and DVDs in the library.
- Implemented functions to add new items to the inventory and remove them when checked out or withdrawn.
- Designed a user-friendly interface for librarians to interact with the inventory system.
- Generated reports on the library's inventory, including available items, checked-out items, and overdue items.

Client Server Communication using IPC techniques on Linux

- Initiated communication by clients sending requests.
- Responded to those requests by servers providing services or resources.
- Optimized data transfer and resource sharing.
- Ensured robust and reliable communication in distributed systems through proper implementation of IPC.

Multiple Data Encryption and Compression using Iterative Technique

- Reduced the size of the data to optimize storage and transmission efficiency.
- Used lossless compression methods to ensure data integrity.
- Protected data by encrypting it after compression.
- Provided a robust solution that combines the benefits of data compression and encryption while enhancing security through iteration.