

VINODH B

Software Developer | C/C++ Programmer | Linux Enthusiast

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TECHNICAL SKILLS

- **Programming Languages:** C/C++, Python, Shell Scripting, Java, Rust
- **Operating Systems:** Linux and all Unix like Systems
- **Tools & Technologies:** Yocto Project, RDK, Git, Vim, Networking, GDB, QEMU, Latex

EXPERIENCE

COMCAST CORPORATION *Development Engineer 1 – Platform Security Team* Dec 2021 - July 2023

- Proficient in Yocto Project for custom Linux distribution creation for RDK devices.
- Implemented Tab Completion feature for a custom Walledgarden shell, enhancing secure SSH access to CPE devices.
- Integrated Software Bill of Materials (SBOM) functionality in the build system, enhancing supply chain security by tracking all software components in the final product.
- Enabled Address Space Layout Randomization (ASLR) for multiple RDKB devices, reducing memory-related security vulnerabilities through position-independent code.
- Developed XPKI certificates for TLS communications within internal components.

COGNIZANT *Program Analyst Trainee (Internship)* Aug 2021 - Nov 2021

- Worked on backend web development using Spring Boot framework in Java.
- Developed RESTful API's for a backend web application.

EDUCATION

- **University of Central Missouri** 2023 - Present
Masters - Computer Science
- **Bharath Institute of Higher Education and Research** 2017 - 2021
B.Tech - Computer Science Engineering - 8.4 / 10.0(CGPA)

PROJECTS

VSHELL (Source Code: [vshell](#))

- Developed a custom shell in C++, inspired by a coding challenge from codingchallenges.fyi, resembling bash.
- Implemented essential shell features such as command execution, I/O redirection, and pipes.
- Incorporated tab completion for files, enhancing user convenience and efficiency.
- Implemented support for shell variables, providing flexibility and customization.
- Integrated a command history feature, allowing users to navigate through previously executed commands using up and down arrow keys.

BENCODE PARSER (Source Code: [Bencode-Parser](#))

- Bencode Parser allows converting Bencoded data(Used in torrent files) into human readable JSON format.
- Developed in C++ and used Jsoncpp library for handling with JSON objects.
- Created an API which can be used in other projects while working with Bencoded data.

WIFI-SCAN (Source Code: [wifi-scan](#))

- Developed a user-friendly wrapper script for wpa_supplicant, streamlining the initiation of network connections.
- Created in Bash, the script prompts users for available networks and facilitates seamless connection initiation.
- Designed to be particularly useful in GUI-less Linux environments, enhancing accessibility and usability.