

Siddharthan T V

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Professional Summary

Computer Science undergraduate with deep hands-on experience in **Linux systems programming, low-level C/C++ development**, and security-focused OS design. Built a **custom Linux distribution from scratch** and developed an original **package manager in C**. Experienced in Unix/Linux environments, Git workflows, and systems-level tooling.

Project Work

FlucidOS — Minimal Linux Distribution & Attack Surface Hardening (2025): Built a **minimal Linux distribution** (~1.6 GB footprint, ~200 MB idle RAM, ~5 s boot) by auditing systemd services, disabling network-exposed daemons, and customizing kernel configuration to reduce attack surface.

- customized kernel configuration and **system services to optimize system footprint and boot performance**
- Developed a minimal binary package manager in C using the .pkg.tar.zst format, **enabling ~25% faster decompression** compared to .tar.xz and .deb packages.
- Explored **process management, memory management, and service isolation**

Tech Stack: C, Linux Kernel, systemd, GRUB, Linux-PAM, GNU Coreutils, Bash

Flurecon — Stateful Packet Inspection & LAN Threat Detection Engine (2026): Developed a **stateful packet inspection engine** for LAN discovery and real-time traffic analysis with TCP flow reconstruction and detection of scan activity, DoS patterns, and lateral movement.

- Implemented **concurrent TCP flow tracking** for live network traffic analysis
- Parsed **raw packets to profile per-device network behavior**

Tech Stack: Rust, libpcap, pnet, etherparse, ARP, IEEE OUI

Skills

Languages: C, C++, X86_64 Architecture

Scripting: Python, Bash

Systems: GNU GCC, GDB, Objdump, Linux Kernel, systemd, GRUB

Tools: Strace, Ltrace, Perf, Git, GitHub, Vim, Nano, VS-code

Education

Sri Venkateswaraa College of Technology, Chennai

B.E in Computer Science Engineering (AI & ML)

Sep 2024 - Present (Expected May 2028)

CGPA: 7.89

Saint Francis de Sales Matriculation Higher Secondary School, Pudukkottai

Higher Secondary (Mathematics, Physics, Chemistry and Computer Science)

Jun 2010 - Mar 2024

Percentage: 70%

Awards and Certificates

- 2nd Place — District Level Science Expo** (Python Personal Assistant)