

# KADAPA BABA SURAJ

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## EDUCATION

**B.Tech in Computer Science**, PES University

Aug 2022 - May 2026

**GPA: 8.7**

2x Prof. CNR Rao Scholarship

## SKILLS

**Languages** C, x86 and ARM Assembly, Verilog, GO, Javascript, Python

**Frameworks** ARM, Arduino, Metasploit, React, Node.js

**Tools** Make, GDB, QEMU, Linux, KVM, Git, Docker

## PROJECTS

**EmeraldOS** C, Assembly, Makefile, QEMU

[GitHub](#)

- Designed and developed a simple operating system with memory management and process scheduling.
- Debugged and tested the OS with QEMU to ensure stability and performance.

**SecureSend** Python, Tkinter, MultiThreading

[GitHub](#)

- Developed an encryption feature that encodes messages into images using steganography.
- Built a user-friendly GUI with Tkinter for message creation and secure transfer.

**BitFusion1.0** C, Makefile

[GitHub](#)

- Designed and developed a 16-bit virtual machine based on the LC-3 architecture.
- Implemented instruction decoding, execution, and memory management features.

**CacheBash** C, Makefile

[GitHub](#)

- Designed a cache simulator to model direct-mapped and fully associative caches.
- Implemented features like instruction decoding and cache hit/miss simulation.

## ACHIEVEMENTS

**Best Implementation** Override, GDSC '22

Oct 2022

- Successfully built an innovative application in Flutter within 48 hours despite having no prior experience.
- Demonstrated leadership and technical skills by guiding a team to secure the Best Implementation award in my first hackathon.

**First Place** Ingenius 3.0

Apr 2023

- Engineered a sophisticated search and rescue robot using a Raspberry Pi and an Arduino, showcasing advanced problem-solving abilities.
- Led a team of 3 members through a 24-hour intense hackathon, winning first place in the flagship event of 2023.

**Contributor** Hacktober Fest

Oct 2022

- Contributed to multiple repositories by solving issues, and introducing new features. Completing the Hacktober Fest challenge in the process.

## EXPERIENCE

**Teaching Assistant** Digital Design and Computer Organization | Dept. of Computer Science Aug 2024 - Present

- Assisted in content preparation for the course in accordance with the new textbook and syllabus, and created problem statements for the DDCO hackathon.

**Technical Mentor** HackerSpace

Nov 2022 - Present

**Technical Member** Association of Computing Machinery

Oct 2022 - Present