Suchitra Shankar

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Education

PES University, Bachelor of Technology, Computer Science and Engineering   2023 - Ongoing
- Current CGPA: 8.53
- CNR Rao Scholarship awarded thrice for academic excellence

Experience

The Innovation Lab, Research Intern   June 2025 – August 2025
- Conducting experimental research on causal profiling for microservices, inspired by Coz.
- Implemented distributed delay injection techniques for identifying critical paths in service architectures.

Twospoon.ai, Project Intern   March 2025 - April 2025
- Worked on building a transpiler from Java to Go, including partial parsing, type inference, and idiomatic mapping using Intermediate Representation

Projects

PawPatterns — A YOLOv6-based deep learning system for real-time dog emotion recognition via live camera feeds.   *Python, YOLOv6, OpenCV*

LetsMakeMusic — AI music generator using LSTM networks trained on melody datasets, outputting playable MIDI files.   *Python, TensorFlow, LSTM*

Nycto OS — A minimal Arch-based Linux distribution featuring a custom installer, a GTK-based package manager, and a Rust-based Linux Security Module for syscall restrictions (WIP).   *C, Bash, GTK, Rust (LSM)*

Vortex — MERN-based event manager for clubs and students with registration and camera-assisted attendance tracking.   *MERN Stack*

PhraseCraft — A contextual dictionary and thesaurus built with NLTK and WordNet API.   *Python, NLTK, WordNet*

mqtt-clone — MQTT protocol, implemented in Python using sockets, encrypted using SSL   *Python*

Current Projects:

Amethyst — Adaptive Log structured merge tree engine in Java   *Java*

Knight — Shell tool using ML to detect dangerous shell commands, moving toward a stronger classifier   *Python*

Skills

Languages: C, C++, Python, HTML, CSS, Javascript, Rust (in progress), Java (Basic), ARM Assembly, Shell.
Technologies: Git, Github, Linux, WebRTC, CRDTs Y.js, Next.js, GTK, IndexedDB, MongoDB, React, Arduino.

Technical Interests

Distributed Systems, Deep Learning, Operating systems, Database Internals.

Volunteering Experience

- Mentor at HackerSpace PESUECC, a student-run open source oriented developer community
- Corporate Relations Manager at Entrepreneurship Club PESUECC.
- Maintainer in Hacknight, a hacktoberfest-style hackathon, of *NightManager* and *PhraseCraft*
- Mentoring in Tilde 4.0, for Bento.rs, a *runc* type container runtime in Rust.
- Club Head of Music Club in NPS Kalkere from 2021 to 2022