SARTHKI VACHHANI

Data Analysis | Full Stack Development | React • JavaScript • Python • REST APIs • Node.js • Next.js
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PROFESSIONAL SUMMARY

Computer Science undergraduate at PES University with hands-on experience building full stack web applications using React, JavaScript, and Python. Proficient in REST API integration, client-side data handling, and deploying production-ready UIs. Also experienced in system-level programming, operating systems, and AI-driven applications.

EDUCATION

PES University — Bangalore, India
B.Tech in Computer Science & Engineering | Expected 2028 | GPA: 7.7 / 10

TECHNICAL SKILLS

Languages:	Python, C, JavaScript
Frontend:	React, Vite, HTML5, CSS3, JavaScript, NodeJS, Next.JS, MERN
Backend:	Python, REST APIs, JSON/CSV Parsing, Data Modeling, ETL Pipelines
UI & Data Viz:	Streamlit, Matplotlib, Interactive Dashboards
Libraries:	Pandas, NumPy, Speech Recognition, OpenCV, Streamlit
Tools & Platforms:	Git, GitHub, Vercel, Ubuntu Linux, Kali Linux
Core CS	Data Structures & Algorithms, Operating Systems, Computer Networks

PROJECTS

Multi-Container Runtime | C • Linux • Kernel Modules
• Built a Linux-based container runtime using namespaces (PID, UTS, mount) and kernel modules.
• Implemented process isolation, scheduling experiments (CFS), and memory limit enforcement.
• Designed supervisor with IPC (pipes, UNIX sockets) and concurrent logging.

GigShield — AI-Powered Parametric Income Insurance (Ongoing) | React • Node.js • Python
• Developing AI-based insurance platform for gig workers with real-time trigger-based payouts.
• Implemented fraud detection using ML (Isolation Forest, graph-based detection).
• Built full-stack system with real-time APIs and automated payout logic.

Netflix Data Analysis Dashboard | Python • Pandas • NumPy • Streamlit
• Designed and deployed interactive dashboard analyzing 8,800+ titles with dynamic filters and ETL pipeline.

VoiceKind — Voice & Gesture Controlled System | Python • SpeechRecognition • OpenCV
• Engineered real-time multimodal system using audio + video input for hands-free interaction.

Quick-It — Quick Commerce Web Application | React • Vite • JavaScript • CSS
• Built a full-stack-style e-commerce frontend with React and Vite, implementing product listing, cart state, and real-time search — mirroring the data and UI layer separation found in production full stack applications.
• Implemented client-side data filtering and search using functional array transformations (map, filter, reduce); architected reusable React components with props and state for scalable UI patterns.
• Optimized bundle size and load performance with Vite tree-shaking; responsive across all device sizes.

Voice-Controlled Home Lighting System | Arduino • Embedded C • Sensors
• Built an embedded system using Arduino UNO to control lighting via voice commands.
• Integrated microphone, voice recognition module, LDR, IR sensor, and DHT11 for smart automation.
• Implemented relay-based switching with manual override and environmental awareness.

ACHIEVEMENTS

• 6th place — CyberClash Cybersecurity Hackathon (attack & defense using Kali Linux)
• Merit Scholarship Certificate