

SAKTHI SARANI S

Address: Bengaluru | Email: sakthipes525@gmail.com | Mobile: +91 6364025543

PROFESSIONAL EXPERIENCE

Software Engineering Intern - AI & Cloud Systems at CoreStack Pvt. Ltd., Chennai

Bedrock Shadow Engine - Engineered a modular FastAPI-based prompt analysis system for Amazon Bedrock that automates cache eligibility detection, prompt segmentation, and multi-model checkpoint optimization using a custom Segment Forest algorithm for cloud-native LLM inference.

..... ~ June 2026 - July 2026

Research Intern at Centre for Computer Networks and Cyber Security, PESU

Blockchain-Enabled Self-Healing IoT Framework for Aviation Systems - Springer Paper published and presented at ICTCS 10th iteration conference on a blockchain-secured, self-healing avionics IoT architecture integrating ML-based predictive fault detection, autonomous redundancy activation, and immutable smart-contract logging to ensure fault tolerance, integrity, and forensic auditability in safety-critical systems.

..... ~ June 2025 - July 2025

Teaching Assistant for the subject Computer Networks under Dr. Animesh Giri of PESU..... ~ Jan 2026 - May 2026

TECH PROJECTS

Real-Time Edge-Based Anomaly Detection System

Edge-cloud anomaly detection architecture integrating Apache Kafka, Spark Structured Streaming, EWMA-based online learning, and dual-layer feedback to enable scalable, low-latency predictive maintenance and structural health monitoring in aviation systems.

.....

Smart Spend - Automated Personal Finance & Analytics Platform

Architected a secure, Python-based personal finance platform featuring authenticated user access, CSV-driven transaction ingestion, normalized SQL database generation, anomaly detection, and automated analytical reporting (graphs and PDFs), demonstrating robust data integrity, backend automation, and financial analytics.

.....

Smart Prosthetic System with Real-Time Terrain & Fall Detection

Engineered an ESP32-based smart prosthetic foot implementing real-time terrain classification, gait analysis, fall detection, and step counting, with sensor-fusion-driven signal processing, OLED feedback, and secure wireless telemetry to smartphones via a Flask-based backend.

.....

AWARDS AND CERTIFICATES

- ❖ Springer Paper Published on Blockchain-Enabled Self-Healing IoT Framework for Predictive Fault Management in Aviation Systems at ICTCS 10th Iteration Conference
- ❖ Won Best of First Years award among the 235 teams registered in Override'23 hackathon conducted by Google Developer Student Clubs
- ❖ Udemy Certification - Blockchain A-Z: Build a Blockchain, a Crypto + ChatGPT Prize
- ❖ Placed in top 7 teams in Capture The Flag conducted by IEEE x Layer8 (PESU Cybersecurity Club)
- ❖ Finished 3 courses in - Google Cybersecurity Professional certificate (Currently pursuing)

EDUCATION

PSBB LEARNING LEADERSHIP ACADEMY

Higher Secondary Education in Physics, Chemistry, Mathematics and Computer Science
Percentage: 90%

Bengaluru, Karnataka

April 2021 - May 2023

PES UNIVERSITY

Bachelor of Technology in Computer Science Engineering (Sem - 6)

Bengaluru, Karnataka

Expected May 2027

TECHNICAL SKILL SET

LANGUAGES: C, C++, Python, Java, JavaScript, HTML5, CSS

TOOLS: Linux (Ubuntu, Kali), Git, GitHub, VS Code, Docker, REST APIs, PLY (Lex/Yacc), Regex

CORE SKILLS: Data Structures, Algorithms, Object-Oriented Programming (OOP), Software Design, Design Patterns, Distributed Systems, Concurrent Programming, Multithreading, Synchronization, Parallel Computing, Backend Development, API Development, System Design, Debugging, Unit Testing, Integration Testing, Database Design, Computer Networks, Operating Systems, Complexity Analysis, Version Control, Agile Development

CLUBS AND EXPERIENCE

- ❖ Student Body Head for Centre of Data Modelling, Analytics and Visualization (2024 - Current)
- ❖ Events and Operations Head for CodeChef - The official competitive programming club of PESU ECC (2025 - Current)
- ❖ Maaya Finance Head - Official Technical and Cultural Fest of PESU (2025)
- ❖ Shunya Math Club Technical Domain Head (2025)