

SAKTHI VEL C

Python Full-Stack Developer

+91 6374052055 | c.sakthivel1.3.2006@gmail.com

linkedin.com/in/sakthivel-c | github.com/sakthivel-136 | sakthivel-blog.io

PROFESSIONAL SUMMARY

Computer Science student and Python Full-Stack Developer specializing in Machine Learning and IoT, focusing on architecting secure, scalable systems. Proven expertise in building real-time AI applications with Gemini 1.5 Pro, FastAPI, and Next.js, while optimizing database performance and implementing robust encrypted data architectures for high-performance environments.

EDUCATION

Bachelor of Engineering in Computer Science

2023 – 2027

Kamaraj College of Engineering and Technology, Virudhunagar, India | GPA: 7.44 (till 5th sem)

TECHNICAL SKILLS

Python • SQL • FastAPI • Flask • Next.js 14 • PostgreSQL • Supabase • Tailwind CSS • RESTful APIs • JWT • Flutter • Git
GitHub • RBAC • TensorFlow • XGBoost • Random Forest • Gemini 1.5 Pro • ESP32/Arduino • MQTT

INTERNSHIP EXPERIENCE

Software Developer Intern

Dec 2025 – Jun 2026

PENTAGON GARMENTS, Virudhunagar, India

- Developed a secure verification system with RESTful APIs and JWT authentication for real-time security monitoring.
- Independently built and deployed the DigiSphere system into production for the company, currently in active daily use by their security staff.
- Received a certification from Pentagon Garments for successful completion and real-world deployment of the project.

Machine Learning Intern

June 2025 – Nov 2025

PANITH INNOVATIONS, Remote

- Developed and deployed predictive Machine Learning models using XGBoost and Random Forest to enhance system accuracy and project performance.

KEY PROJECTS

DigiSphere | FastAPI, Next.js, PostgreSQL, JWT

July 2026

- Architected a full-stack verification system with Role-Based Access Control (RBAC) and real-time monitoring.
- Optimized database queries reducing response time by 40% for high-concurrency environments.
- Deployed and hosted the system in production for Pentagon Garments; actively used by the company for real-world security monitoring. Live at apps.pentagontextiles.com | Code: github.com/sakthivel-136/veripatrol.
- Awarded a certification by Pentagon Garments for successful project completion and live deployment.

KURAL – AI Voice-Based Grievance Redressal System | Gemini 1.5 Pro, PSTN

Oct 2025 – Present

- Engineering a PSTN-based platform using Gemini 1.5 Pro to convert offline voice calls into structured digital reports.
- Implementing speech recognition and automated intent detection to classify and escalate grievances to authorities.

IoT Smart Air Quality & Climate Monitoring System | ESP32, Random Forest

Nov 2025

- Developed a predictive alert system using Random Forest to detect health risks and HVAC inefficiencies.
- Presented research findings at the ICASET-2026 International Conference in Chennai.

CONFERENCES & ACHIEVEMENTS

- Grand Winner** – Student Pitch Competition at Mini Technovision 2K26.
- Presenter** – Presented research on IoT-integrated Air Quality Systems in ICASET - 2026.
- Patent Filed** – Intellectual Property application filed for "Mr. Strict" (AI Proctoring System).
- ISRO Certification** – Completed AIML training for Crop Acreage Mapping via official ISRO workshop.
- Oracle Certified Foundations Associate** – Earned the Oracle University Agentic AI Certified Foundations Associate certification
- Industry Certification** – Certified by Pentagon Garments for developing and deploying the DigiSphere system into the real-world production use.