

# SAKTHIVEL C

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## PROFESSIONAL SUMMARY

Computer Science student specializing in full-stack development, machine learning, and IoT solutions. Proficient in Python, JavaScript, and SQL with experience building secure web applications using FastAPI, Next.js, and PostgreSQL. Proven ability to optimize system performance, develop RESTful APIs, and create real-time healthcare applications.

## EDUCATION

### Bachelor of Engineering in Computer Science

2023 – Present

Kamaraj College of Engineering and Technology, Virudhunagar, India | GPA: 7.42/10

### Higher Secondary (Class XII)

2022 – 2023

K.V.S. Matriculation Higher Secondary School, Virudhunagar, India | 63%

## TECHNICAL SKILLS

**Programming Languages:** Python, JavaScript, SQL

**Frontend:** Next.js, React, HTML, CSS, Flutter

**Backend:** FastAPI, Flask, Node.js, RESTful APIs

**Databases:** PostgreSQL, MySQL

**ML/AI:** Gen AI, TensorFlow, Streamlit

**Tools:** Git, GitHub, Jupyter Notebook, Arduino IDE, VS Code

**Other:** JWT Authentication, RBAC, IoT Integration, Data Analytics

## PROFESSIONAL EXPERIENCE

### Software Developer Intern

Dec 2025 – Present

PENTAGON GARMENTS, Virudhunagar, India

- Developed secure verification system with RESTful APIs, JWT authentication, and role-based access control for security monitoring operations
- Optimized monitoring dashboards and database queries, reducing server response time by 35%

### Machine Learning Intern

June 2025 – Nov 2025

PANITH INNOVATIONS, Remote

- Gained hands-on experience in Supervised, Unsupervised, and Reinforcement Learning algorithms
- Analyzed real-world datasets to determine effective machine learning models for various industry applications

## KEY PROJECTS

### Security Rounds Verifier | FastAPI, Next.js, PostgreSQL, JWT

- Architected full-stack security verification system with role-based access control and real-time monitoring workflows
- Delivered responsive frontend with Next.js, optimizing database queries to reduce response time by 40%

### AI-Powered Dental Cavity Checker | Python, Streamlit

July 2025

- Developed automated dental image analysis system using Python and Streamlit for real-time diagnostics
- Integrated Live APIs to deliver immediate feedback through secure encrypted login portal system
- GitHub: [github.com/sakthivel-136/Cavity-checker](https://github.com/sakthivel-136/Cavity-checker)

### IoT Smart Air Quality & Climate Monitoring System

Nov 2025 – Present

- Creating Predictive Alert System identifying health risks and detecting HVAC inefficiencies using IoT sensors
- Utilized IoT hardware and data analytics to provide actionable insights for room maintenance and safety

## ACHIEVEMENTS AND CERTIFICATIONS

### Application of AIML for Crop Acreage Mapping

April 2025

- Issued by ISRO (Online Conference) for precision farming and yield prediction conference

### SkillRack Competitive Programming

Ongoing

- Successfully solved 101 problems across multiple programming domains with strong algorithmic skills