

Shivam Kumar Giri

+91-9334372094 | kumargirishivam2@gmail.com | [Linkedin](#) | [Github](#) | [Leetcode](#)

EDUCATION

- Vellore Institute of Technology** Chennai, IND
B.Tech – Electronics and Communication Engineering, 8.12/10 CGPA (Sept 2022 – Present)
- Jawahar Vidya Mandir, Shyamali (CBSE board)** Ranchi, IND
PCM with English - 87.67% in 12th
- Ursuline Convent School, Khalari (CBSE board)** Ranchi, IND
95.16% in 10th

PROJECTS

Smart Storage Health Monitor with Predictive Maintenance (ESP32/TensorFlow Lite) (Jan 2024)

- Designed and deployed an **ESP32-based predictive maintenance system** for storage drives using **DHT11, vibration sensors**, and **microSD card logging**.
- Trained and quantized a failure prediction model using **TensorFlow Lite**, achieving early warning for storage anomalies.

Fire Alarm System using Arduino (Arduino UNO, Buzzer, Flame Sensor) (May 2024)

- Developed a real-time fire detection system using **temperature and flame sensors** integrated with **Arduino UNO**.
- Programmed threshold-based alerts and automatic buzzer activation to signal hazard events.

Heart Health Monitor (ESP32 + Pan-Tompkins) (Dec 2024)

- Adapted the **Pan-Tompkins QRS detection algorithm** for PPG signals, enabling accurate pulse peak detection through multi-stage digital filtering and moving window integration.
- Displayed real-time BPM and HRV values on LCD and transmitted processed signals to a **Serial Analyzer** for waveform visualization.

WORK EXPERIENCE

- Served as the General Secretary of the Event Managers Club, VIT Chennai. (Sept 2024 – Present)
- Overall Events and Venue Management head for more than 300 events in Vibrance'25 and TechnoVit'24.

TECHNICAL SKILLS AND ABILITIES

- Embedded/Hardware:** ESP32, UART, SD card interface, PWM
- Software/Dev :** Java, MySQL, Python, HTML/CSS, Git, Firebase, TensorFlow Lite
- Familiar with:** C++(Basic), DBMS, Operating System
- Developer Tools:** Git, VS Code, Jupyter, Arduino IDE
- Design Technology:** Canva, Adobe Photoshop

TECHNICAL HIGHLIGHTS

- Completed and Earned **Web Development Certificate from Ethnus** (July 2024)
- Selected for **core team head** in TechnoVit'24 and Vibrance'25 due to strong project leadership. (Sept 24 – Apr 25)
- Built and deployed **2+ IoT projects** with cloud integration and ML support.

ACHIEVEMENTS

- Earned **Web Development Certificate from Ethnus**
- Earned **Cloud Infrastructure 2025 Certified Data Science Professional from Oracle**