

Saurabh Shetkar

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EDUCATION

Vishwakarma Institute of Information Technology (VIIT)

Pune, India

Bachelor of Technology in Electronics & Telecommunications Engineering

Sept 2022 – Aug 2026

- Honors:** Intra-College Tech Conclave for Innovation and Implementation Excellence

TECHNICAL SKILLS

Languages: C++, Python, Bash, SQL, JavaScript

AI/ML: Deep Learning (CNN), NLP, Computer Vision, Pandas, NumPy, Time-series Analytics

Cloud & DevOps: AWS (EC2, S3, IAM, CloudWatch), Linux (Red Hat, Ubuntu), Git, CI/CD

Embedded/IoT: ESP32, Real-time Data Streaming, Sensor Integration, IoT Cloud Architecture

PUBLICATIONS

A Comparative Framework for Analyzing Runway Availability | *First Author*

Research Paper

- Published research analyzing airport runway scheduling optimization using **Backtracking**, **Genetic Algorithms**, and **Simulated Annealing**.
- Conducted comparative benchmarking of algorithmic efficiency to solve complex resource allocation problems in high-traffic scenarios.

PROFESSIONAL EXPERIENCE

FirebirdVR

Pune, India

Game Developer

July 2025 – Dec 2025

- Engineered 'FixWith Python', an educational simulation platform that integrates Python programming challenges directly into gameplay mechanics.
- Architected dynamic narrative modules and logic systems, optimizing the codebase for smooth execution across multiple levels.
- Collaborated with cross-functional teams to align game mechanics with pedagogical goals, resulting in measurable improvements in student engagement and retention.
- Developed adaptive scripting solutions to personalize difficulty curves based on real-time user performance data.

KEY PROJECTS

AI-Based Deepfake Detection System | *Python, CNN, Computer Vision*

Project

- Designed a deep learning pipeline to detect manipulated media, utilizing **Convolutional Neural Networks (CNN)** for feature extraction and classification.
- Implemented robust data preprocessing workflows to handle large video datasets, achieving high accuracy in identifying synthetic artifacts.
- Focused on security-first AI methodologies to combat digital misinformation and identity fraud.

Algorithmic Trading Bot with NLP | *Python, Pandas, NumPy, APIs*

Project

- Built an automated swing trading engine integrating real-time market data with **NLP-based sentiment analysis** from news sources.
- Engineered data pipelines using Pandas and NumPy to process high-volume time-series financial data for signal generation.
- Developed comprehensive analytics dashboards to monitor trade execution, P&L, and market volatility in real-time.

ESP32 IoT Cloud Integration System | *AWS IoT, Embedded C, Bash*

Project

- Architected a scalable IoT solution connecting ESP32 microcontrollers to **AWS Cloud** (EC2, S3) for remote monitoring.
- Implemented real-time sensor data streaming and visualization dashboards to track device health and environmental metrics.
- Automated system deployment and maintenance workflows using custom Bash scripts, reducing manual configuration time.

CERTIFICATIONS

Red Hat Certified System Administrator (RHCSA): Validated skills in Linux system administration, security hardening, and shell scripting automation.