PIYUSH YADAV

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LinkedIn — GitHub — Portfolio

PROFESSIONAL SUMMARY

Electronics & Communication Engineering undergraduate with a strong foundation in Python programming, embedded systems, and AI-based technologies. Hands-on experience through academic and personal projects in real-time applications, including computer vision, web development, and robotics. Quick learner with strong problem-solving skills, eager to apply technical knowledge and grow in a professional engineering environment.

TECHNICAL SKILLS

Programming Languages: Python (5 HackerRank), C/C++ (3 HackerRank), Java, HTML, CSS
Frameworks & Libraries: Flask, OpenCV, Bootstrap, Chart.js
Tools & Platforms: GitHub, MATLAB, Arduino IDE, Android, Raspberry Pi, SOLIDWORKS
Core Competencies: Object-Oriented Programming, Embedded Systems, Computer Vision, AI/ML, Statistical Modeling, Application Development, Testing & Debugging
Soft Skills: Team Leadership, Analytical Thinking, Problem Solving, Adaptability, Communication Excellence

EDUCATION

Bachelor of Technology in Electronics & Communication Engineering **2022 – 2026**
Pranveer Singh Institute of Technology, Kanpur

12th Grade (Science) **2022**
Morning Star Sr. Sec. Academy

10th Grade (Science) **2020**
Morning Star Sr. Sec. Academy

KEY PROJECTS & TECHNICAL EXPERIENCE

Expense Tracker Web Application **Python, Flask, Chart.js**

- Developed a full-stack web application for financial tracking and analysis with interactive data visualisation
- Implemented RESTful APIs for data management and integrated Chart.js for dynamic expense analytics
- Designed a user-friendly interface using Bootstrap, enhancing user experience and accessibility

AI Virtual Calculator **OpenCV, Python, Computer Vision**

- Built a gesture-based calculator using OpenCV for real-time hand-drawn mathematical expression recognition
- Applied computer vision algorithms and image processing techniques for accurate gesture detection
- Demonstrated proficiency in AI/ML concepts through practical implementation of intelligent systems

Motion Detection Surveillance System **OpenCV, Python**

- Engineered a real-time object tracking system for edge surveillance applications using computer vision
- Optimised detection algorithms for performance efficiency in resource-constrained environments

Bluetooth Quad-Pod Robot **Arduino, Android, Embedded Systems**

- Designed and built a quadruped robot for terrain surveillance with wireless Android control via HC-05 module
- Integrated hardware-software components demonstrating embedded systems expertise and IoT implementation

PATENTS & PUBLICATIONS

Smart Biker Safety Airbag Jacket with AI-Powered Fall Detection and Emergency Alert System
Indian Patent Application No. **202511126861 A**, Published Jan 2026

- Developed an AI-enabled wearable safety jacket with automated airbag inflation
- Implemented fall detection using MPU6050 and ESP32 microcontroller
- Integrated GSM & GPS modules for real-time emergency alerts and live location tracking
- Designed system for applications in road safety, healthcare, and industrial protection.

CERTIFICATIONS & PROFESSIONAL DEVELOPMENT

- Python Programming Fundamentals
- Object-Oriented Programming with Python
- Software Engineering Internship
- Agentblazer Champion
- Java Fundamentals
- Saviynt Identity Security for the AI Age

ACHIEVEMENTS & RECOGNITION

- **5-Star Python Rating** on HackerRank, demonstrating advanced programming proficiency
- **3-Star C/C++ Rating** on HackerRank, showcasing a strong foundation in systems programming
- Solved **150+ coding problems** on competitive programming platforms (LeetCode, CodeChef)
- Proven analytical and problem-solving capabilities through consistent performance in technical challenges