

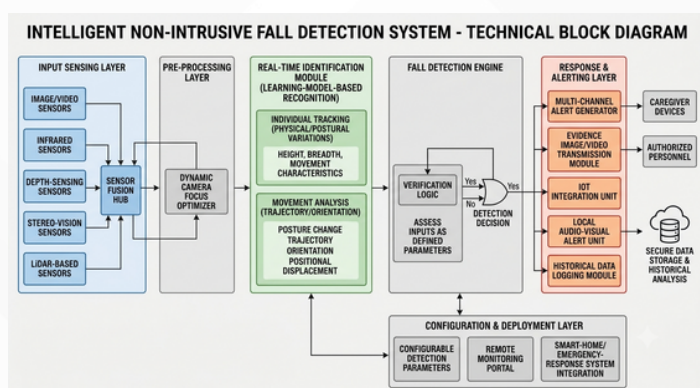
A FALL DETECTION SYSTEM AND METHOD THEREOF

Seeking parties interested in licensing and commercialization of technology.

Technology Brief

The Technology defines an intelligent, non-intrusive monitoring solution for real-time fall detection using computer vision and machine learning. By eliminating the need for wearable hardware, the system captures ambient video streams, dynamically maintains optical focus, and tracks individual postural metrics to distinguish true fall events from routine activities. It bridges real-time hazard identification with immediate multi-channel emergency alerting and analytical logging.

Block Diagram



Technical Applications

The intelligent fall detection technology utilizes dynamic optical focus optimization and machine learning algorithms to analyze real-time video streams from multi-modal sensors—including RGB, infrared, depth-sensing, and LiDAR—enabling non-intrusive, real-time fall verification without requiring wearable hardware. By continuously tracking body height-to-breadth ratios, spatial displacement, and rotational movement trajectories.

The system accurately differentiates true fall events from routine activities such as sitting, bending, or kneeling, thereby drastically reducing false positives. Upon detecting an incident, it automatically triggers immediate multi-channel alerts accompanied by visual evidence to caregivers and integrates with local IoT infrastructure to sound audio-visual alarms even during network outages, providing a scalable safety solution across residential, clinical, and industrial environments.

Salient Features

- ✓ Non-Intrusive, Sensorless Real-Time Detection
- ✓ Sensor-Agnostic Hardware Integration
- ✓ Context-Aware False-Positive Mitigation

Glimpse of the Technology



REFERENCE NUMBER

iTNT-TECH-0172



TECHNOLOGY SECTOR

Automobile, Auto-components & EV



IP STATUS

Patent Granted



APPLICATION NUMBER

202541038776



TECHNOLOGY READINESS LEVEL

TRL - 4

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