

FIREAUDIT – AI-POWERED FIRE RISK ASSESSMENT SYSTEM

Transportation and
Infrastructure

Pilot District

Vizianagaram, Andhra Pradesh

**Geospatial
Innovation Accelerator**

IIT Tirupati Navavishkar I-Hub Foundation (IITNif)

Technology Summary

FireAudit is an AI-driven risk assessment platform designed to detect inflammable objects inside buildings and generate a fire safety score. Users upload room videos through a secure web dashboard. The system uses an object detection model to classify inflammable vs non-inflammable items, maps object occurrences floor-wise, and generates a fire safety report. An admin dashboard is used to validate AI outputs before publishing final scores to clients. Future roadmap includes LiDAR-based 3D mapping for spatially precise risk modelling.

**Technology
Readiness Level**

4

Value Proposition

1. Automates fire risk inspection without manual site visits
2. Standardized, auditable, and scalable assessment across buildings
3. Enables proactive compliance and insurance readiness
4. Supports future integration with 3D LiDAR for higher accuracy

Market Potential / Deployment Plan

Target Customers – Real estate developers, industrial parks, ports, airports, government safety authorities, insurance companies, smart city programs.

Deployment Plan:

1. Pilot rollouts in high-risk/regulated facilities
2. SaaS-based subscription dashboard for enterprises
3. Enterprise integration with insurance and compliance platforms
4. Future B2G adoption for municipal safety audits

Applications

1. Fire safety compliance audits
2. Insurance risk underwriting & claim validation
3. Industrial safety inspection
4. Smart building facility management
5. Government disaster mitigation programs

Environmental / Social Impact

1. Reduces human loss & property damage through early risk detection
2. Minimizes physical inspection footprint & associated emissions
3. Improves public safety in dense urban infrastructure
4. Reduces fire-related carbon impacts by preventing incidents

Contribution to Sustainable Development Goals (SDGs)

SDG 3, 9, 11 & 13

Building Safety Report - Thazhal Office

Total Floors	Total Rooms	Total Objects	Total Fire Safety Objects	Total Fire Hazard Objects
3	3	17	0	3

#	Object	Count
1	Search	2
2	Book	8
3	Scissors	2
4	Beer	8
5	Can	1
6	Carpet	2
7	Chair	28
8	Teach	4
9	Drinking table	4

Surveys
Building Assessment Form

New Building Survey

Building Name: _____ Survey Date: 22-10-2025

Surveyor: _____

Create Building Survey