

# User Panel with AI Integration and Checklist

## User Panel Overview

This user panel is designed to streamline the Fire NOC application process by leveraging AI to segregate applications based on risk factors, institution type, and other criteria. The panel ensures that all necessary documents and compliance measures are in place before the application is processed further.

## Dashboard Overview

- Application Segregation: AI-powered categorization of applications based on institution type, risk factors, and other parameters.
- Application Status: Real-time updates on the status of each application, with color-coded indicators.
- Personalized Recommendations: AI-generated suggestions on necessary fire safety measures based on the institution's profile.

## AI-Driven Segregation Criteria

### 1. Institution Type:

- Educational Institutions: Moderate IoT needs; focus on evacuation and basic fire-fighting equipment.
- Healthcare Facilities: High IoT needs; critical fire safety measures due to vulnerable individuals.
- Commercial Buildings: Varies based on size and function; AI evaluates IoT necessity.
- Industrial Facilities: High IoT needs; comprehensive monitoring due to combustible materials.

### 2. Risk Assessment:

- Fire Hazard Levels: AI analyzes building materials, usage patterns, and past incidents.
- Environmental Factors: Climate, proximity to fire stations, and local regulations.

- Historical Data: AI evaluates past fire incidents for risk prediction.

### 3. Size of the Institution:

- Small Institutions: Basic fire safety measures with minimal IoT integration.
- Medium-Sized Institutions: Balance of traditional safety measures and IoT devices.
- Large Institutions: Comprehensive IoT systems with real-time monitoring.

### 4. Need for IoT Implementation:

- High Need: High occupancy, combustible materials, complex layouts.
- Moderate Need: Some IoT devices like smoke detectors and sprinklers.
- Low Need: Traditional fire safety measures may suffice.

## Detailed Application View

- AI Analysis Report: AI-generated report summarizing risk profile and suggested safety measures.
- Document Upload Section: Secure area for document uploads with AI-driven checks.
- Communication with Officials: Messaging feature for communication with relevant officials.

## Notifications and Alerts

- Priority Notifications: Alerts for high-priority applications based on AI analysis.
- Pending Actions: Automated reminders for pending tasks or document submissions.
- Approval/Rejection Updates: Real-time notifications with AI-driven explanations.

## User-Friendly Analytics

- Application Insights: View analytics on application processing time, approval rates, and compliance.
- AI Insights: AI-driven insights on fire safety readiness and recommended improvements.

## Checklist Integration in User Panel

The checklist ensures that all required documents, safety measures, and prerequisites are completed before the application is processed further. It includes a progress bar, auto-save feature, and AI-powered hints.

## **Checklist Items**

### **1. Basic Information Submission:**

- Applicant Details: Full name, contact information, designation.
- Institution Details: Name, type, location, size.
- Building Details: Floor plans, materials, occupancy limits, usage.

### **2. Document Upload:**

- Building Plan Approval: Approved plan from local authority.
- Fire Safety Certificate: Existing certification, if any.
- Insurance Documents: Proof of fire-related insurance.
- Emergency Plan: Documented evacuation and fire response plan.
- Fire Safety Equipment List: Detailed list of installed equipment.

### **3. Risk Assessment Data:**

- Fire Hazard Assessment: AI-assisted form evaluating potential hazards.
- Environmental Impact Report: Assessment of environmental fire risks.
- Historical Incident Report: Records of past fire incidents or violations.

### **4. IoT Device Readiness (Future Integration):**

- IoT Device Installation Proof: Confirmation of installed IoT devices.
- IoT Device Testing Report: Report on functional testing of devices.
- Real-Time Monitoring Setup: Confirmation of operational monitoring system.

## 5. Compliance with Fire Safety Norms:

- Local Fire Department Clearance: Initial clearance or comments from local department.
- Fire Drills: Proof of conducted drills, documented with dates and records.
- Staff Training: Certification of fire safety training for staff.
- Emergency Contact Information: Updated emergency contacts.

## 6. Application Fee Payment:

- Payment Receipt: Proof of NOC application fee payment.
- Invoice Download: Downloadable payment invoice.

## **Checklist Interaction Features**

- Progress Bar: Visual progress bar showing completion status.
- Auto-Save: Real-time auto-save and validation of entries.
- AI-Powered Hints: Suggestions and warnings for incomplete or incorrect items.
- Submit Button Activation: Enabled only after 100% checklist completion.

## **AI Validation**

- Document Verification: AI cross-checks documents for completeness and relevance.
- Checklist Consistency: System checks for consistency across provided information.

## **User Notifications**

- Incomplete Checklist Alert: Alerts if users attempt to submit without completing the checklist.
- Completion Confirmation: Confirmation message once the checklist is fully completed.
- Real-Time Updates: Notifications on checklist item validation and approval.