Project Design Phase-II
Requirement Analysis (Functional & Non-functional)

Date	31 October 2022
Team ID	PNT2022TMID03399
Project Name	Emerging methods for early detection of forest fires
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Many methods have been proposed to detect forest fires, such as camera-based systems, WSN-based systems, and machine learning application-based systems, with both positive and negative aspects and performance figures of detection.
NFR-2	**Security**	We have designed this project to secure the forest from wild fires.
NFR-3	**Reliability**	It has achieved 1.24 seconds of classification time with an accuracy of 91% and F1 score of 0.91.
NFR-4	**Performance**	In the event of a fire, the primary objective of using drones is to gather situational awareness, which can be used to direct the efforts of the firefighters in locating and controlling hot spots. Just like urban fires, forest fires to require monitoring so that firefighters know what they are dealing with.

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	**User Registration**	Registration through Form Registration through wildfire portal.
FR-2	**User Confirmation**	Confirmation via Email Confirmation via OTP

FR-3	**Data Prediction**	Scientists create computer models to predict wildfire potential under a range of potential climate futures. Using different projections of temperature and precipitation, scientists predict where and when wildfires are most likely to occur.
FR-4	**Using Sensors**	This Bosch environment sensors installed in the forest fire detection system using artificial intelligence deployed as early wildfire warming tool.

NFR-5	**Availability**	Forest fires (wildfires) are common hazards in forests, particularly in remote or unmanaged areas. It is possible to detect forest fires, elevated CO2, and temperature levels using AI
NFR-6	**Scalability**	A widely used measure of fire intensity is fireline intensity, which is the rate of heat transfer per unit length of the fire line (measured in kW m−1) and represents the radiant energy release in the flaming front.

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