Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	09 November 2022
Team ID	PNT2022TMID04190
Project Name	Project - 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.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through the registered government ID
FR-2	User Confirmation	Confirmation via OTP
FR-3	Overall Surveillance Report	Helps to understand the current scenario in the forest by giving report as “no fire” or “negative”.
FR-4	Cloud Server Access	To save and run the model from the camera footage
FR-5	Live Camera Feed	Real-time monitoring by the forest authorities
FR-6	GSM Module	Warn the nearest forestry manager and local residents fire station

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	This project-as-a-service can be used by governments for managing protected forests, large corporations managing large tracts of land where trees are grown for commercial purposes, and NGOs seeking to protect forests. Authorities are used to monitor the behavior of endangered animals.
NFR-2	**Security**	To ensure the security of the monitoring process, the server is used as IBM Cloud with very good encryption standards. These files are only accessible to corporate government officials. Another security check is made by the OTP for verification. Backup videos are stored on IBM Cloud servers.
NFR-3	**Reliability**	The project is very reliable compared to its predecessor. A generational open source forest monitoring system that is very robust due to its easy manipulation of data, low maintenance costs and

		high initial cost.
NFR-4	**Performance**	This project outperforms other wildfire detection methods such as using satellite surveillance, IOT sensors, or IR sensor-based cameras. The accuracy of this model also improves over time.
NFR-5	**Availability**	This data can be only accessed by the officials as this is very sensitive information regarding thousands of acres of forest lands. So this can be opened anywhere by the authorized person as the AI model is connected in IBM server.
NFR-6	**Scalability**	Initial costs to set up are high compared to other methods, but there are little to no maintenance costs, and the costs to combat wildfires, pollution, and wildlife loss are very high relative to initial set-up costs. increase. Projects are much easier to implement and therefore easily scale to larger parts of the forest.