Project Design Phase - 2
Solution Requirement (Functional and Non - Functional)

Date	15-11-2022
Team ID	PNT2022TMID46301
Project Name	Emerging Methods for Early Detection of Forest Fires

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	This system is really used as it can able to sense and find the Forest fire earlier. By detecting the Forest fire earlier, the great damage and destruction of the forest would be prevented. The lives and the livelihood of the animals living in the forest would also be saved.
NFR-2	Security	This project doesn't contain any secured informations so there is no role of security factors.
NFR-3	Reliability	The performance of the system would be really good. Probability of giving false information is very low. As the system is working based on the deep learning algorithm,it would easily predict and give the correct information.
NFR-4	Performance	The performance mostly depends on fully monitoring the forest and giving alert when the fire occurs. It must be processed and executed within a fraction of seconds using the deep learning algorithm. If fire occurs, it would be detected by the Deep learning algorithm and then the

NFR-5	Availability	The availability of the solution is effective and it should be helpful in the great way to suppress the fire without any great damage. The system can be fitted anywhere around the forest
NFR-6	Scalability	It is scalable enough to fit the vandal proof cameras by constructing great poles in the Forest. The cost of establishing the cameras and poles for the entire forest may be high. It is acceptable to fit them over any place of the forest.

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR NO.	FUNCTIONAL REQUIREMENTS (EPIC)	SUB REQUIREMENT (STORY/SUB-TASK)
FR-1	Fire Detection	Capture the image. Process the image Apply deep Learning Techniques
FR-2	Image Processing	The already trained data would be there in the Knowledge base. The captured image should be compared with the data in the Knowledge base. By comparing, the fire can be detected.
FR-3	Deep Learning	The fire detection process should be done using the Convolutional Neural Network. The fire should be detected.
FR-4	Alert	If fire occurs the alarm will alert the forest officer . Give information about the fire location through GPS. Give the Fire Spread range measured by deep Learning.
FR-5	Fire Suppression	The senior officer will come and order the

		fire service officers to stop/control the fire.