

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

Date	17 October 2022
Team ID	PNT2022TMID35819
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.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Data collection	The system shall be given the sets of fire images and recognize whether there is a fire or a smoke or if there is no fire
FR-2	Data acquisition	The system shall take real inputs of images of surveillance camera and determine whether the image contains a fire or not
FR-3	Fire Detection	The system shall have an accuracy rate of at least 90% When attempting to detect if a given image has a fire or not
FR-4	Alert	The system shall alert the forest officials through alerting systems

**Non-functional Requirements:**

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

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	Usage of the camera images to observe, detect and report fire events.
NFR-2	<b>Security</b>	Trained on all extreme conditions and different location in detecting and predicting fire.
NFR-3	<b>Reliability</b>	An real time system of getting videos and images is used to augment the accuracy of the detection.
NFR-4	<b>Performance</b>	The monitoring system should enabled all time and any small chance of fire to forest should be updated soon as possible

NFR-5	<b>Availability</b>	Forest fire 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	<b>Scalability</b>	The display unit are enabled through out the application process and final output is achieved