**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 03 October 2022 |
| Team ID | PNT2022TMID27896 |
| 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.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | *Detect Fire* | *systems are activated when movement in the sprinkler system is detected, indicating that the sprinklers are responding to a fire.* |
| FR-2 | Alert Occupants | *These alarms will be bright, loud, obnoxious, and impossible to ignore, which help mobilize individuals to follow your evacuation plan.* |
| FR-3 | Manage Risks | *Automatically shutting doors in different zones, powering off ventilation and air conditioning, or redirecting elevators to bring cars to a designated level.* |
| FR-4 | Notify Authorities | *This ensures the fire department is en route as quickly as possible, so they can respond and extinguish the fire before it becomes an even bigger threat.* |
| FR-5 | Wireless Fire Detection | *Wireless becoming more mainstream in almost every technology and walk of life.* |

**Non-functional Requirements:**

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

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | *The algorithm depends on previous weather conditions in order to predict the fire hazard level of a day*. |
| NFR-2 | **Security** | *The progress in scientific data collection has resulted in huge and continuously rising amount of spatial data* |
| NFR-3 | **Reliability** | T*he related hardware schemes and implemented algorithms are given in detail for both methods.* |
| NFR-4 | **Performance** | *The success of a forest fire detection system can be assessed in terms of its accurate and quick detection capabilities.* |
| NFR-5 | **Availability** | *Ash destroys much of the nutrients in the soil and can cause erosion, which may result in floods and landslides* |
| NFR-6 | **Scalability** | *The Edge Computing layer is beneficial for both the performance and the energy consumption of the AI nodes.* |