**Project Design Phase-I**

**Proposed Solution Template**

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| Date | 19 September 2022 |
| Team ID | **PNT2022TMID35327** |
| Project Name | Emerging Methods for Early Detection Of Forest Fires |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

Project team shall fill the following information in proposed solution template.

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| **S.No.** | **Parameter** | **Description** | |
| 1. | Problem Statement (Problem to be solved) | **Statement**: To find emerging methods for early detection of forest fires using artificial intelligence.    **Description:** This technology is to be implemented to locate a forest or a bush fire based on the concept of deep learning and YOLO algorithm**.** After detecting, authorities are to be alerted immediately to mitigate any damage. | |
| 2. | Idea / Solution description | 1. | In case of forest fire detection the burning substances are primarily identified as sceptical flame regions using a division strategy to expel the non-fire structures and results are verified by a deep learning model. |
|  |  | 2. | The technology used to locate a forest or a bush fire is based on the concept of deep learning and YOLO algorithm. This deep learning model is deployed on a UAV which help in detection of fire, meanwhile it can be monitored by web application in order to prevent it at advance. |
| 3. | Novelty / Uniqueness | 1. | Accurate and reliable recognition of sceptical flame regions by means of using YOLO v3 algorithm. |
|  |  | 2. | Unlike previous algorithms, the exact location of the origin of the forest fire is also detected and sent to the web-app. |
| 4. | Social Impact / Customer Satisfaction | 1. | Because of earlier prediction, loses of life, destruction of various environmental, geographical and essential resources can be avoided. |
|  |  | 2. | By detecting a fire quickly and accurately, this system can limit the emission of toxic products created by combustion, as well as global- warming gases produced by the fire itself. |
| 5. | Business Model (Revenue Model) | 1. | The software platform to provide the fully autonomous processing of data received from the camera of UAV to obtain live feed in web- App. |
|  |  | 2. | This can also be implemented as a mobile application where the services can be accessed on subscription basis. |

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| 6. | Scalability of the Solution | 1. | This application can be developed as the world wide surveillance system to monitor the several sections of different forests.. |
|  |  | 2. | Filtration of false positive result by comparing the dataset with the video feed obtained. |