**Project Design Phase-I**
**Proposed Solution**
**Template**

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| Date | 15 November 2022 |
| Team ID | PNT2022TMID05673 |
| Project Name | Emerging Methods for Early Detection of Forest Fires |
| Maximum Marks | 2 Marks |

**Proposed Solution:**

These solution template relates the current situation to a desired result of this project and also describe the benefits acquire when desired result is achieved.

| S.No. | Parameter | Description |
|---|---|---|
| 1. | Problem Statement (Problem to besolved) | ❖ Monitoring and regulating forest fire is a critical responsibility to assist environmentalists in their search for a long-term solution to enhance environmental quality and wildlife.<br>❖ To assist them, quantitative ground measurements as well as robust spatial and temporal modelling is needed in order to detect the most affected areas in time. It is a bit complex solution.<br>❖ The satellite sensor measurement of forest fire is a more objective solution. |
| 2. | Idea / Solution description | ❖ We have developed a web application which can predict the wildfire using a combination of hyper-spectral satellite imagery data.<br>❖ Satellite images are taken from Google earth pro and unsplash website.<br>❖ Convolutional Neural Network (CNN) is a deep learning model which makes use of multiple hidden layers to train the images and provide accurate results.<br>❖ The trained models are rendered and made available on the web server. |
| 3. | Novelty / Uniqueness | ❖ Compatible with all devices.<br>❖ Both image and video based predictions.<br>❖ Alert system. |
| 4. | Social Impact / Customer Satisfaction | ❖ Help wildfire monitoring at different scales of analysis [from the big forests to national parks, biospheres].<br>❖ Quick results. |
| 5. | Business Model (Revenue Model) | This model can be developed by minimum cost at the same time it will provide the peak performance, higher accuracy and the result will be more effective than traditional techniques. |
| 6. | Scalability of the Solution | Customers need not spends a lot of time and effort in cameras, sensors and ground data-based prediction websites to forecast the forest fire |