Project Design Phase-I
Proposed Solution Template

Date	7 October 2022
Team ID	PNT2022TMID52514
Project Name	Emerging Methods for Early Detection of Forest Fires
Maximum Marks	2 Marks

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Forests are one of the main factors in balancing the ecology.Forest fires are one of the most worrisome natural disasters,destroying thousands of acres of forests and nearby urban zones,affecting plant,animals and human life.So, the fire detection is important in this scenario. Finding of the exact location of the fire and sending notification to the fire authorities soon after the occurrence of fire can make a positive impact.
2.	Idea / Solution description	Our solution aims at collecting the dataset to test and train the model . The damage and the cost for distinguish fire because of forest fire can be reduced when the fire detected early as possible. So, the fire detection is important in this scenario. Finding of the exact location of the fire and sending notification to the fire authorities soon after the occurrence of fire can make a positive impact. We have implemented a fire detection system to detect fire by capturing images. The system uses CNN(convolutional neural network), and image processing techniques.

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3.	Novelty / Uniqueness	Real time computer program detect forest fire in earliest before it spread to larger area. Our proposed system depends on using AI to make it cheaper and easier for the forest management. Accuracy and timely prediction using AI, CNN and API made it possible.
4.	Social Impact / Customer Satisfaction	The destroying homes, wildlife habitat and timber, and polluting the air with emissions harmful to human health. The proposed solution fulfills the satisfaction requirements of the customer as it provides instant alerts on fire detection which helps the forest officer to take action as soon as possible.
5.	Business Model (Revenue Model)	- A working model in which mini cameras continuously monitor the forest area and capture live images from satellites is a trained model that automatically detects fire or smoke. - This proposed model can detect the exact location of the fire and can be activated by SMS.The fire officer can implement quick responses and preventive measures.
6.	Scalability of the Solution	✓ The device should be compatible with a minimum of 4GB RAM and WINDOWS 10 (x64 bit) and 100 GB ROM to support usage of various software like PYTHON 3.6.5. ✓ Testing and training undergo using latest technology like KERAS ,TENSORFLOW ,NUMPY and PILLOW.