Ideation Phase
Define the Problem Statements

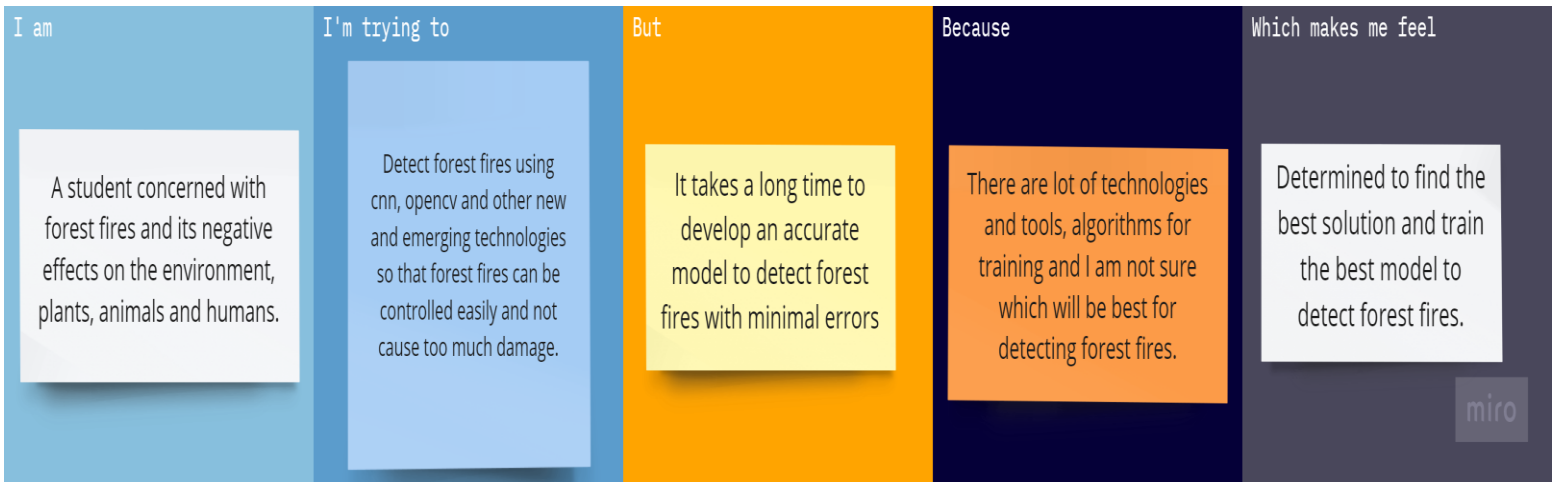
Date	14 September 2022
Team ID	PNT2022TMID21552
Project Name	EMERGING METHODS FOR EARLY DETECTION OF FOREST FIRES
Maximum Marks	2 Marks

Problem Statement:

Forest fires are being a very common threat in this time period. Every year large areas of forests are affected by forest of varying intensity. Based on the forest inventory records, 54.40% of forests in India are exposed to occasional fires, 7.49% to moderately frequent fires and 2.40% to high incidence levels while 35.71% of India's forests have not yet been exposed to fires of any real significance. These forest fires cause a lot of damage to the local flora and fauna. It also contributes to climate change as they release huge amounts of carbon dioxide gas into the atmosphere. When forest fires in hilly areas burn down small shrubs and grass which can lead to soil erosion and landslides. Forest fires also affect economy as raw materials are burned and they also affect families who are dependent on forest for food, fuel and fodder. Large forest fires also emit huge amounts of smoke, soot and poisonous gas that harm the health of humans. So detecting forest fires is important as we can control it earlier and prevent disastrous consequences.

PROBLEM STATEMENT	To detect forest fires to help control them in order to save local flora and fauna. Using AI, computer vision, image processing and neural network to perform real time detection of forest fires.
WHO DOES IT AFFECT?	It affects the environment as large amount of vegetation is destroyed and huge amounts of green houses gases are released in the atmosphere. It affects the health of the people living in surrounding region due to the release of poisonous gases. It pushes rare flora and fauna to the verge of extinction. it disrupts the life of tribal communities living in the forest and even lead to death of tribal people.

CAUSES OF THE ISSUE	Lightning is one of major causes of forest fire. Extremely dry wood can catch fire easily due to lightning or just raised temperature. Sometimes the fire can also be man-made. Burning patch of land for agriculture can turn into uncontrollable forest fires sometimes
WHY WE NEED TO SOLVE THE PROBLEM?	Forests are a haven of biodiversity and is teeming with different lifeforms. It is important to preserve these lifeforms. They also provide essential raw materials and sustain nearby rural population. They help maintain water cycles and help increase underground water level and does not let rain water run into oceans. So preventing forest fire is essential for the protection of plants and animals and to help our development. So early detection of forest fires is an essential societal need. Early detection of forest fires is required to control and keep their damage to minimum.



Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	A student concerned with frequent forest fires and its adverse effects.	Develop a project for early detection of forest fires.	I am facing difficulties in developing accurate model.	I am not very knowledgeable in new technologies for detecting forest fires.	More eager to learn new technologies to develop a project to detect forest fires.
PS-2	Forest ranger	Protect the flora and fauna in the forest.	Forest fires destroys all the vegetation and kills , injures all animals	Man-made and natural Forest fires cannot be predicted earlier and put out easily	Frustrated about frequent forest fires
PS-3	Fire fighter	Extinguish forest fires.	I am not able control the forest fires	Forest fires are unpredictable and grow very large very quickly	Uncapable in my job
PS-4	Person depended on forest for livelihood.	Collect food and fuel from forest	I am finding inadequate materials	Forest fires destroy all resources	Insecure about my livelihood