**Ideation Phase**

**Define the Problem Statements**

| Date | 19 September 2022 |
| --- | --- |
| Team ID | PNT2022TMID20667 |
| Project Name | Project - Natural Disasters Intensity Analysis and Classification using Artificial Intelligence |
| Maximum Marks | 2 Marks |

**Customer Problem Statement Template:**

Create a problem statement to understand your customer's point of view. The Customer Problem Statement template helps you focus on what matters to create experiences people will love.

A well-articulated customer problem statement allows you and your team to find the ideal solution for the challenges your customers face. Throughout the process, you’ll also be able to empathize with your customers, which helps you better understand how they perceive your product or service.

Graphical user interface, text, application, email

Description automatically generated

| **Problem Statement (PS)** | **I am (Customer)** | **I’m trying to** | **But** | **Because** | **Which makes me feel** |
| --- | --- | --- | --- | --- | --- |
| PS-1 | Human(People) | Avoid the natural disaster | Due to natural disasters, there are droughts, economic crises, capital destruction etc. | Natural disasters are increasing because of population growth,Urbanisation(a lot of people in small places), alteration of the natural environment(man-made islands) | Natural disasters affect human life and destroy natural resources. |

**PROBLEM STATEMENT**

The purpose of the problem statement is to identify the issue that is a concern and focus it in a way that allows it to be studied in a systematic way. It defines the problem and proposes a way to research a solution, or demonstrates why further information is needed in order for a solution to become possible.

Problem Statement is inclusive of below answers:

* Who does it affect/does not affect.
* What does it affect/does not affect.
* How does it affect/does not affect.
* When is it a problem/is not a problem.
* Where is it a problem/is not a problem.

Natural disasters not only disturb the human ecological system but also destroy the properties and critical infrastructures of human societies and even lead to permanent change in the ecosystem. Disaster can be caused by naturally occurring events such as earthquakes, cyclones, floods, and wildfires. Many deep learning techniques have been applied by various researchers to detect and classify natural disasters to overcome losses in ecosystems, but detection of natural disasters still faces issues due to the complex and imbalanced structures of images.

The natural disasters disturbs the ecosystem,both humans and animals.(WHO)

In a disaster, **you face the danger of death or physical injury**. You may also lose your home, possessions, and community. Such stressors place you at risk for emotional and physical health problems. Stress reactions after a disaster look very much like the common reactions seen after any type of trauma.(WHAT)

**Wildlife can be killed by the force of the disaster or impacted indirectly through changes in habitat and food availability**. Endangered species are especially vulnerable when habitat is destroyed. Water quality is impacted when sewage treatment facilities flood or debris enters reservoirs and waterways.(HOW)

Natural disasters generally constitute an emergency since **they require immediate intervention due to their high impact on human health and safety**; they affect the normal functioning of working infrastructure, interrupting normal day activities and representing a risk for residents and workers in affected areas.(WHEN)

An area is defined as hazard prone area **if the mortality risk is higher than a certain threshold**. A cyclone is defined as a wind storm with maximum speed of more than 64 knots per hour. The definition includes typhoons and hurricanes.(WHERE)

