

PROJECT DESIGN PHASE-1

Problem Solution Fit

Date	10 October 2022
Team ID	PNT2022TMID38277
Project name	Natural Disaster Intensity Analysis and Classification using Artificial Intelligence
Maximum marks	2 marks

Problem solution fit:

The Problem-Solution Fit simply means that you have found a problem with your customer and that the solution you have realized for it actually solves the customer's problem. It helps entrepreneurs, marketers and corporate innovators identify behavioral patterns and recognize what would work and why.

Purpose:

Solve complex problems in a way that fits the state of your customers. Succeed faster and increase your solution adoption by tapping into existing mediums and channels of behavior.

Define CS, fit into CL	1. CUSTOMER SEGMENT(S) CS <p>Natural disaster intensity can mainly affected to people.</p> <p>It can cause great damages on the environment human health.</p>	6. CUSTOMER LIMITATIONS <small>EG. BUDGET, DEVICES</small> CL <p>Many deep learning techniques have been applied by various researchers to detect and classify natural disasters to overcome losses in ecosystem.</p> <p>But detection of natural disasters still faces issues due to the complex and imbalanced structures of images.</p>	5. AVAILABLE SOLUTIONS <small>PLUSES & MINUSES</small> AS <p>When using AI to detect extreme events such as avalanches or earthquakes, the availability of data can be a limiting factor.</p> <p>It can identify climatic patterns, at-risk areas and populations.</p>	Explore AS, differentiate
	2. PROBLEMS / PAINS PR <p>Hazardous waste.</p> <p>Loss of utilities like electricity and water.</p> <p>Infrastructure- related problems such as closed roads & communications losses.</p>	9. PROBLEM ROOT / CAUSE RC <p>Causes for such calamities can be contributed to deforestation, soil erosion and pollution.</p> <p>The major causes of catastrophic disaster are natural phenomena occurring in the earth's crust as well as on the surface.</p>	7. BEHAVIOR <small>+ ITS INTENSITY</small> BE <p>Emotional instability, stress reactions, anxiety trauma and other psychological symptoms are observed commonly after the disaster and other traumatic experiences.</p>	
Identify strong TR & EM	3. TRIGGERS TO ACT TR <p>1. Urge of saving the lives of people.</p> <p>2. Fear of facing a downfall of economy due to the loss caused by natural disaster.</p>	10. YOUR SOLUTION SL <p>We developed a multilayered deep convolutional neural network model that classifies the natural disaster accurately and within short span of time. The model uses an integrated webcam to capture the video frame and the video frame is compared with the predefined model and the video and the type of disaster is identified and showcased on the openCV window.</p>	8. CHANNELS of BEHAVIOR CH <p>ONLINE</p> <p>1. Collects images from online sources like google.</p> <p>2. Gathering information about the disaster through social media by the people.</p> <p>OFFLINE</p> <p>Classify the disaster from the collected images.</p>	Extract online & offline CH of BE
	4. EMOTIONS <small>BEFORE / AFTER</small> EM <p>BEFORE: Fear, inadequate, uncertain.</p> <p>AFTER: Proud, Happiness of saving people.</p>			