Project Design Phase-I - Solution Fit Template

Project Title: Natural Disaster Intensity Analysis and Classification using Artificial Intelligence

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Define CS, fit into CC

1. CUSTOMER SEGMENT(S) CS

Natural disaster intensity can mainly affected to people.

It can cause great damage on the environment, human health.

6. CUSTOMER CONSTRAINTS CC

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.

5.AVAILABLE SOLUTIONS

When using AI to detect extreme events such as avalanches or earthquakes, the availability of data can be a limiting factor.

AI-based algorithms can organize disaster data in the order of severity.

It can identify climate patterns, at-risk areas and populations

Explore AS, differentiate

Focus on J&P, tap into BE, understand RC

2.PROBLEMS

- Hazardous waste.
- Loss of utilities like electricity and water.
- Infrastructure-related problems such as closed roads & communications losses.

9. PROBLEM ROOT CAUSE

Causes for such calamities can be contributed to **deforestation, soil erosion, and pollution**.

The major causes of catastrophic disaster are natural phenomena occurring in the earth's crust as well as on the surface.

7.BEHAVIOUR BE

Emotional instability, stress reactions, anxiety, trauma and other psychological symptoms are observed commonly after the disaster and other traumatic experiences.

Focus on J&P, tap into BE, understand RC

3. TRIGGERS

Disaster can be caused by natural, man-made and technological Hazardous, as well as various factors that influence the exposure and vulnerability of a community.

4. EMOTIONS: BEFORE / AFTER EM

Emotional instability, stress reactions, anxiety, trauma and other psychological symptoms are observed commonly after the disaster and other traumatic experiences.

These psychological effects have a massive impact on the concerned individual & also on communities.

10. YOUR SOLUTION

- AI-based algorithms can organise disaster data in the order of severity.
- It can identify climate patterns, at-risk areas and populations, and send early warnings for potentially disastrous weather events.
- AI can be used to foretell the economic and human impact of natural disasters.

8.CHANNELS of BEHAVIOUR CH

ONLINE

Researchers are applying artificial intelligence to accurately predict natural disasters.

Multispectral Images using Multi-layered Deep Convolutional Neural Network.

OFFLINE

Drones and robots have been used to locate survivors and transmit information to emergency teams.

The SERVAL project was developed in response to the Haiti earthquakes.