

Live Disaster Information Aggregation Software

ABSTRACT:

Disaster response agencies struggle with efficiently gathering and processing timely, accurate information from sources like social media, news portals, and open channels during emergencies. Manually handling this vast, unstructured data is inefficient and resource-intensive, often delaying response times and compromising disaster management.

This project aims to develop **real-time disaster information aggregation software** that automatically collects, analyses, and categorizes data from multiple sources using advanced algorithms and artificial intelligence (**AI**). It integrates machine learning (**ML**) and natural language processing (**NLP**) techniques to filter and classify data by disaster type, location, severity, and urgency. The processed information is presented on a centralized, user-friendly dashboard for quick decision-making by disaster response agencies, enhancing accuracy and operational efficiency.

Develop algorithms starting with **keyword-based classification**, followed by machine learning models for more accurate disaster categorization, including multi-label classification. Implement **sentiment analysis** using text preprocessing and model selection like BERT for sentiment classification.

By automating the aggregation and classification of disaster-related data, the software empowers agencies to access timely, verified information, enabling faster decision-making and resource allocation during emergencies.