PAAVAI ENGINEERING COLLEGE,

Paavai Nagar , NH-7,Pachal,Namakkal-637018,TamilNadu

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

IBM

PROJECT TITLE

NATURAL DIASTERS INTENSITY ANALYSIS AND CLASSIFICATION

USING ARTIFICIAL INTELLIGENCE.

(2021-2022)

DATE:03.09.2022

GUIDE NAME : Dr.R.MOHANA PRIYA

FINAL YEAR B.E(ECE)

S.NO	TEAM ID : PNT2022TMID13948	
1	*TEAM LEADER*	*KAVIYA R*
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Literature Survey:

S.NO	TITLE OF THE PROJECT	ADVANTAGES	DISADVANTAGES	TECHNOLOGY USED
1	Natural disasters of intensity analysis	1.Water covers dry land 2.Clear water ways by removing any garbage in them. 3.Clearing canals to store more water	1.Public Health Issues 2.Environmental Problems 3.Infrastructural Damage	1.Signal Processing ,Image processing 2.Artificial Neural Network 3.Machine learning
2	Artificial intelligence to improve resilience and preparedness against adverse flood events	1.Data collection ,monitoring and handling; 2.AI-based algorithms for detecting and effective communication	Lack of Transparency in the data used to train it	1.Machine Learning 2.RF 3.Artificial Neural Networks (ANN)
3	Big data in natural disaster management	1.It allows researchers detailed analysis of all communication. 2.Many Natural Hazard forecasting systems rely on big data	Addresses issues related to storage , accessibility, analysis	1.Wireless Sensor web 2.Internet Of Things
4	Social media analytics for natural disaster management	1.Social networks such, email and text messaging could help people prepare for the emergency. 2. Recovering from the natural - communication is done through social media.	1.Prepare citizens in areas likely to be affected by a disaster; 2. Receive real-time data from affected areas;	Web-based and Mobile technologies
5	Use of social media data in disaster management	1.Speedy Detection of socially disruptive events 2.Facilitation of crisis communication 3.Attainment of situational awareness	1.Disaster early warning messages to social media users home locations are at risk 2. Spatial pattern analysis enabled qualified assessment of rapid damage	1.Physical sensor: USGS, NOAA 2.Human sensor: Flickr crowdsourcing
6	Tropical cyclone intensity estimation using deep CNN	1.Better Initialization. 2.Leading to more accurate forecasts 3. It is used worldwide for TC intensity estimation.	1. The main problem with training was the quality of dataset 2. Using regularization techniques make the complex feature extraction task from hurricane images effective.	Deep convolutional neural network
7	Social media information sharing for natural disaster response	1.They are easy to implement and can scale with the dataset. 2. Able to handle both numerical and categorical data	1.They are not flexible enough to naturally capture more complex relationships. 2. Computational cost is quite high.	Machine learning

8	*Utilizing social media for information dispersal during local disasters*	1.Increased the public's desire to receive information quickly. 2. Correcting disaster-related information via social media	**1.** The lack of research on this framework in practice. **2.** Limited by the conceptual constraints of the framework	1.Social Media Emergency Management (SMEM) Guidance Tool 2.Crisis and Emergency Risk Communications (CERC) Framework
9	*Development of social analytics system for emergency event detection and crisis management*	1.The public can use this information to gain situational awareness 2. Emergency response authorities	*It can control its own content on social media but is not able to control stakeholders' interpretations, comments or sharing of the content.*	1.Natural Language Processing (NLP), 2.Machine Learning (ML) 3. Deep Learning (DL)
10	*Social media for intelligent public information and warning in disasters*	*Improved capabilities Streamlined Operations Ability to reach more people through timely alerts, warnings and crisis related messages*	*1.Disaster management agencies tend to lack trust in social media content posted by random users. 2. Fake information and the spreading of rumors, other types of deception in social media*	*Machine learning*