LITERATURE SURVEY

NATURAL DISASTER INTENSITY ANALYSIS AND CLASSIFICATIONS USING AI

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ABSTRACT:

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. To tackle this problem, we developed a multilayered deep convolutional neural network model that classifies the natural

disaster and tells the intensity of disaster of natural The model uses an integrated webcam to capture the video frame and the video frame is compared with the Pre-trained model and the type of disaster is identified and showcased on the OpenCV window.

<u>Artificial Intelligence For Disaster Risk Reduction</u>

AI refers to technologies that mimic or even outperform human intelligence when performing certain tasks. ML, which is a subset of AI that includes supervised,unsupervised or reinforcement learning, can be simplified as parsing data into algorithms that learn from data to make classifications or predictions. AI methods offer new opportunities related to applications in, for instance, observational data pre-processing as well as forecast model output post-processing. The methodological potential is strengthened by novel processor technologies that allow heavy-duty, parallel data processing.

Mapping Earthquake-Triggered Landslide Susceptibility By Use Of Artificial Neural Network (ANN) Models

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Abstract: A landslide susceptibility map, which describes the quantitative relationship between known landslides and control factors, is essential to link the theoretical prediction with practical disaster reduction measures. Thus, it can be concluded that the assessment based on existing earthquake-induced landslides and

the ES model could provide better background information for seismic landslide susceptibility mapping and disaster prevention. Conclusion: Based on the coseismic landslides inventory of the 2013 Minxian, China Mw5.9 earthquake and ten control factors (elevation, slope angle, slope aspect, curvature, slope position, distance to drainages, lithology, earthquake intensity, peak ground acceleration, and distance to the seismogenic fault), the ANN models were adopted to build the landslide susceptibility maps in the affected area. During this mapping, two cases were considered

Landslide Risk Prediction By Using GBRT Algorithm: Application Of Artificial Intelligence In Disaster Prevention Of Energy Mining

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Geological disasters on the slopes of open-pit mine dumps in energy extraction fall into the category of mine production process safety. For the mine safety, it is crucial to accurately predict the landslide risk of open-pit mine dumps. In order to prevent landslide geological disasters in open-pit mine dumps under the effect of heavy rainfall, this study establishes a fast and accurate landslide risk prediction model for open-pit mine dumps based on machine learning (ML). rainfall intensity and duration are important for constructing a prediction model for landslide risk in open-pit mine dumps.

SNO	TITLE OF THE PAPER	DETIALS OF THE PAPER	OBJECTIVE	METHODOLOGY USED	TAKE AWAY
1.	Land Surface Temperature retrieval using HJ-1B/IRS data and analysis of its effect	2013 IEEE	To monitor pollution, ecosystem destruction and natural disaster on large-scale dynamically and around the clock	Generalized signal and channel alogrithm and parameter acquistion	In this paper, the generalized single-channel algorithm is utilized to achieve the LST from HJ-1B/IRS.
2.	Study on Risk assessment model of urban Drought in Hilly Area of Central Sichuan Basin	2009 IEEE	It represents a model of risk assessment of urban drought which integrates hazard, exposure, vulnerability and emergency response and recovery capability	Three methods are : Natural disaster index method Weighted comprehensive evaluation method Analytic Hierarchy Process	In this paper it is used for mathematical model for the drought risk assessment and then use this model to calculate the intensity of drought risk of Nanchong city in Hilly Area of Central Sichuan Basin from different perspective.
3.	Urban Damage Detection Using Decorrelation of SAR Interferometric Data	2002 IEEE	It indicates a fact that the building damage causes the interferometric decorrelation.	It can be detected using interferometric decorrelation of ERS and JERS-1 SAR data.	In this paper, we progress in the study for quantitative discussion of the degree of decorrelation and the

					case of JERS-1 SAR interferometric data pairs to detect the damaged area by the earthquakes.
4.	Quantifying change after natural disasters to estimate infrastructure damage with mobile phone data	2018 IEEE	It indicates that how mobility patterns are changing, in the post disaster time-frame, is crucial in order to settle rescue centers and send help to the most affected areas	In this section,we describe the approach taken to work with aggregated CDR data	In this paper,we analyzed the relationship between the reach score changes and the damage index of the earthquake in urban areas, and it showed that the correlation was negative on the day after the natural disaster
5.	Spatio–Temporal Analysis for Understanding the Traffic Demand After the 2016 Kumamoto Earthquake Using Mobile Usage Data	2018 IEEE	It mainly focuses on the effect of natural disasters on the population density transition	Analytical procedure and Spatial statistic methods are used.	In this paper ,we analysis that by using the scICA and regression analysis captures the major travel demand patterns using the population density before the earthquake.
6.	Degree of network damage: A measurement for intensity of network damage	2014 IEEE	To define degree of network damage (DND), a measurement used to classify the effect of a destructive event on network infrastructures, human, and traffic flows	A five-scale degree of network damage is developed to indicate the impact of disaster events on networks. We combine two network metrics to determine the degree of network damage from the perspective of an ISP.	In this paper, we focus on a practical problem of providing an uniform criterion for accessing the impact of disasters on the network.