Literature Survey

Team ID : **PNT2022TMID38617**

Team Title : **NATURAL DISASTERS INTENSITY ANALYSIS AND CLASSIFICATION BASED ON ARTIFICIAL INTELLIGENCE**

College Name : **ADHIPARASAKTHI ENGINEERING COLLEGE**

Team Leader : **VIGNESH M**

Team Member : **SHYAMKUMAR S**

Team Member : **SRIAKASH A**

Team Member : **VASUDEVAN A**

1	**Paper title**	“Natural Disasters Intensity Analysis And Classification Based On Multi Spectral Images Using Multilayer Deep Convolutional Neural Network” Muhammad Aamir, Tariq Ali, Muhammad Irfan, Ahmad Shaf, Muhammad Zee Shan Azam,Adam Glowacz,Frantisek Brumercik,Witold Glowacz , Samar Alqhtani andSaifur Rahman. Academic Editor: Rudy Arthur,Published: 9 April 2021
	Problem definition	A natural disaster is "the negative impact following an actual occurrence of natural hazard in the event that it significantly harms a community".We proposed a multi-layered deep convolutional neural network. The proposed model works in two blocks: Block-I convolutional neural network (B-I CNN), for detection and occurrence of disasters, and (Block-II) convolutional neural network (B-II CNN), for classification of natural disaster intensity types with different filters and parameters. It is used to find the overall accuracy for the whole model.
	Methodology/ Algorithm	Natural Language Processing (NLP),Convolutional Neural Network(CNN)
	Advantages	● Hey Can eliminate Unwanted Invasive Plants From Certain Ecosystems . ● Enrich Soils With Fresh Nutrients, And Encourage Greater Plant Diversity. ● Animals Are Also Sometimes Attracted To The New Growth In Fresh Burn Areas.
	Disadvantages	● In A Disaster, you Face The Danger Of Death Or Physical Injury. ● You May Also Lose Your Home, Possessions, And Community.

2	**Paper title**	"Neural Network Applications In Earthquake Prediction" Meta-Analytic And Statistical Insights On Their Limitations.Arnaud Mignan And Marco Broccardo neural Network Applications In Earthquake Prediction ; Meta-Analytic And Statistical Insights On Their Limitations seismological Research Letters (May 2020).
	Problem definition	Earthquake prediction, the Grail of Seismology, is, in this context of continuous exciting discoveries, an obvious choice for deep learning exploration. We reviewed the literature of artificial neural network (ANN) applications for earthquake prediction (77 articles, 1994-2019 period) and found two emerging trends: an increasing interest in this domain over time and a complexification of ANN models toward deep learning.
	Methodology/ Algorithm	Artificial neural network (ANN), Neural Network
	Advantages	• Cost-Efficiency. Disaster Recovery Plans Have Multiple Components. • Increased Employee Productivity. • Greater Customer Retention. • A Better Understanding Of Scalability.
	Disadvantages	• Victims, Selective Mortality, and Population Recovery. • Land Loss and Capital Destruction. • Economic Crisis.

3	**Paper title**	"Simultaneous Earthquake Detection On Multiple Stations Via A Convolutional Neural Network" Shaobo Yang;Hu;Haijiang Zhang;Guiquan Liu, Seismological Research Letter(2021)
	Problem definition	It is very important to develop a fast and reliable event detection and association algorithm. Generally, event detection is first performed on individual stations followed by event association through linking phase arrivals to a common event generating them.
	Methodology/ Algorithm	Convolutional Neural Networks (CNN)
	Advantages	• Volume Monitoring • Better Access • Cave Evolution Monitoring
	Disadvantages	• Not A Direct Displacement • Still An Evolving Technology • Uncertainty In Interpretation

4	**Paper title**	"A Deep Learning Approach of Recognizing Natural Disasters on Images using Convolutional Neural Network and Transfer Learning" International Conference on Artificial Intelligence and its ApplicationsDaryl B. ValdezRey Anthony G. Godmalin December 2021
	Problem definition	Natural disasters are uncontrollable phenomena occurring yearly which cause extensive damage to lives, property and cause permanent damage to the environment. However by using Deep Learning, real-time recognition of these disasters can help the victims and emergency response agencies during the onset of these destructive events.
	Methodology/ Algorithm	Deep learning(DL),Convolutional Neural Network(CNN)
	Advantages	• It's Ability To Execute Feature Engineering By Itself • Anns Have The Ability To Learn And Model Non-Linear And Complex Relationships, • Which Is Really Important Because In Real-Life, Many Of The Relationships Between Inputs And Outputs Are Non-Linear As Well As Complex.
	Disadvantages	• The Detection Of Natural Disasters By Using Deep Learning Techniques Still Faces Various Issues Due To Noise And Serious Class Imbalance Problems. • To Address These Problems, We Proposed A Multilayered Deep Convolutional Neural Network For Detection And Intensity Classification Of Natural Disasters.