ARTIFICIAL INTELLIGENCE

Natural Disasters Intensity Analysis& Classification Using AI

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Team ID	PNT2022TMID49976
Project Name	Natural Disaster Intensity Analysis & Classification Using AI

CYLONE

Data Sources	Variables/Model	Units	Temporal Coverage	Spatial Coverage	Levels
NCEP/NCAR	geopotential height	m	4-times daily and daily	2.5 x 2.5 degree grid	multiple level
	precipitable water	kg m^{-2}	4-times daily	"	surface
	relative humidity	%	"	"	"
	sea surface pressure (SLP)	hPa	"	"	"
	u and v wind components	m s^{-1}	"	"	"
	air temperature	°C	"	"	"
	relative vorticity	10^{-5} s^{-1}	"	"	"
	moisture convergence*	g kg^{-1} s^{-1}	hourly	"	"
ECMWF	Convective Available Potential Energy (CAPE)	J kg^{-1}	"	0.5x0.5 degree grid	"
	total of precipitation	mm	"	"	"
APHRODITE	total of precipitation	mm	daily	0.25x0.25-degree grid	"
NOAA ARL	HYSPLIT backward trajectory	AGL	hourly	360 x 180 at 1 degree	multiple level

*Moisture convergence was computed with GrADS software using 7 variables: relative humidity, air temperature, vapour pressure mixing ratio, u and v wind components and dew point temperature.

EARTH QUAKE

EQ01 Northridge – 1994[a]	6.7	17.40	9.71	2.91	2.22
EQ02 El Centro – 1940[a]	6.9	2.14	3.49	2.37	1.47
EQ03 Kobe – 1995	6.9	8.21	5.99	1.47	1.42
EQ04 Loma Prieta – 1989[a]	6.9	3.52	2.67	1.37	1.47
EQ05 Christchurch – 2010[a]	7.0	7.38	6.64	0.76	0.71
EQ06 Miyagi Ken-Oki – 2003[b]	7.1	8.25	11.10	7.89	6.96
EQ07 Chi-Chi – 1999[a]	7.7	2.92	4.34	3.66	1.61
EQ08 Gorkha – 2015[a]	7.8	1.54	1.60	0.22	0.22
EQ09 Chile Coquimbo – 2015[a]	8.3	6.77	5.45	5.70	8.73
EQ10 Great East Japan – 2011[b]	9.0	12.20	25.90	5.08	6.01