Large earthquake prediction using deep learning

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This report presents a comprehensive analysis of geographical data pertaining to various global locations, including Alaska, the Caribbean Islands, Japan, Southern California, Indonesia, China + North India, Turkey, Italy, Peru, Iran, NW Africa, Greenland, and Haiti. The data encompasses latitude and longitude coordinates defining the boundaries of each region, alongside the record count associated with each. The analysis aims to elucidate the geographical scope and significance of the data records, providing insights into the spatial distribution and potential applications of the data.

In terms of time, the specified parameters of start_time as October 1, 1923, and end_time as October 1, 2023, frame a comprehensive century-long seismic study. All earthquake data used were collected from the USGS Earthquake Catalog.

| Area	Min Latitude	Max Latitude	Min Longitude	Max Longitude	Number of Events all	all	M>2.5	M>3.5	M>5
USA	25°N	50°N	-125°W	-66°W	2.2m	2259447	144635	19977	971
Alaska	51°N	71°N	-180°W	-129°W	809k	808304	116344	26516	3081
Caribbean Islands	10°N	22°N	-85°W	-59°W	79k	78496	52869	11077	651
Indonesia	-11	6	95°E	141°E	71k	70703	69412	69136	13133
Japan	24°N	46°N	122°E	153°E	54k	53484	52587	51961	9164
Italy	36°N	47°N	6°E	19°E	35k	34276	16865	4366	311
China + North India	20°N	53°N	78°E	135°E	33k	32383	31021	30587	5431
Turkey	36°N	42°N	26°E	45°E	20k	19999	19628	7750	809
Peru	-18	-0	-81°	-69°	10k	9603	9413	9365	1873
Iran	25°N	40°N	44	63	9k	8350	8284	8142	1206
NW Africa	15°N	37°N	-17°W	11°E	8k	7793	5691	2299	162
Greenland	59°N	83°N	-73°W	-12°W	3k	2206	2164	2147	258
Haiti	18°N	20°N	-75°W	-71°W	1k	337	334	320	38
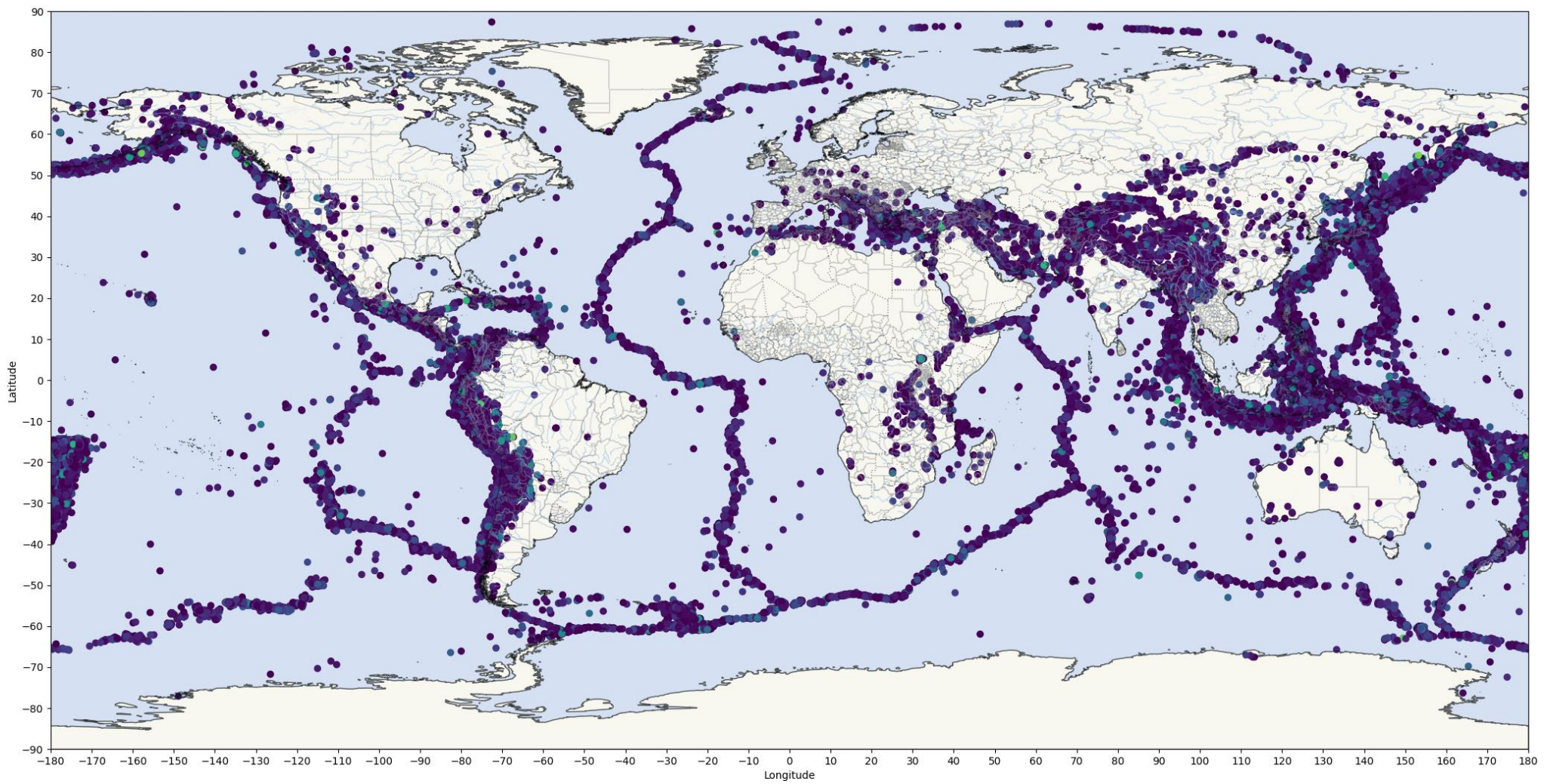
Figure :Map of earthquakes of the last 50 years with a magnitude greater than 5