

Dataset

- In our research, the dataset used was collected from PyImage Search readers, who used Google Images to collect the total number (4428) of images in different classes. The dataset was separated into four classes: cyclone, earthquake, flood and wildfire, with 928, 1350, 1073 and 1077 images, respectively, as shown in figure.
- The dataset was preprocessed to remove the noise by using an adaptive histogram equalizer. The whole dataset was divided into three groups: training, testing and validation.
- In total, 60% of the dataset was used for training, 23% for testing and 17% for validation. These percentages of the dataset were used to inform the machine on the percentage values of the dataset to be used for testing, training and validation purposes. The validation set was used to count the number of epochs for the whole training process. The details of the dataset are shown in table.
- Table

Disaster type	Total	Training	Test	Validation
Cyclone	928	500	300	128
Earthquake	1350	600	300	450
Flood	1073	600	300	173
Wildfire	1077	600	300	177
Total	4428	2300	1200	928

- Grouping of natural disasters dataset.

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