**Project 1 - Group 6**

# An Analysis of the Recent History of Global Medium to High Magnitude Earthquakes

## Members:

* Ben
* Ash
* Hazel
* Rafi
* Richard

## Datasets

* Earthquake data: <https://earthquake.usgs.gov/fdsnws/event/1/>
* Earthquake death toll data: https://ourworldindata.org/natural-disasters
* Country shape file: <https://www.naturalearthdata.com/downloads/10m-cultural-vectors/10m-admin-0-countries/>

## Assumptions and Filters

To reduce the size of the dataset, we’ve needed to filter out earthquakes from the data retrieval. We are:

* restricting earthquake magnitude to greater or equal to 5
* retrieving data from 2010-2023
* filtering out earthquakes with a recorded depth of greater than 100km

## Objectives of this project:

1. Successfully retrieve earthquake data from various open API sources - **Ben**
2. Look at the distribution and spatial characteristics of the magnitudes of earthquakes. Is there any correlation between earthquake magnitude and depth? - **Rafi**
3. Record the number of earthquakes across different countries and globally. Rank these countries by the number of earthquakes and through time. Analyse the spatial distribution of the number of earthquakes. - **Ash**
4. Investigate the frequency of earthquakes per month and year. Analyse this spatially - **Richard**
5. Investigate what are the relationships between magnitude of earthquake and causality rates and determine which countries are most affected. Is there a relationship between causality rates and a countries economic status? - **Hazel**
6. Stretch Question: Is it possible to correlate tidal fluctations with earthquake occurrence **- Ben**