> This is the READ_ME file of the Group A12 DFP Final Project

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> Link for the demo video: https://youtu.be/7xIfR9FBRnM

> Here are some directions to run our project.

Modules to install

> before you run the code, please install the following modules in your terminal(simply run the following code would be fine)

For tabula:
python -m pip install tabula-py
conda install -c conda-forge tabula-py

For pandas:
python -m pip install pandas
conda install -c anaconda pandas

For numpy:
python -m pip install numpy
conda install -c anaconda numpy

For glob:
python -m pip install glob2
conda install -c anaconda glob2

For seaborn:
python -m pip install seaborn
conda install -c anaconda seaborn
https://seaborn.pydata.org/installing.html

For sklearn:
python -m pip install scikit-learn
Run below for installation on conda:
$ conda create -n sklearn-env -c conda-forge scikit-learn
$ conda activate sklearn-env

For csv:
python -m pip install python-csv
conda install -c anaconda csvkit

For datetime:
python -m pip install DateTime
conda install -c trentonoliphant datetime

For matplotlib:

```
python -m pip install matplotlib
conda install -c conda-forge matplotlib
```

For warnings:
```
python -m pip install pytest-warnings
conda install -c bioconda perl-warnings-register
```

For urllib:
```
python -m pip install urllib3
conda install -c anaconda urllib3
```

For bs4:
```
python -m pip install beautifulsoup4
conda install -c anaconda beautifulsoup4
```

For random:
```
python -m pip install random2
conda install -c conda-forge mkl_random
```

For time:
```
python -m pip install python-time
conda install -c conda-forge time
```

For tqdm:
```
python -m pip install tqdm
conda install -c conda-forge tqdm
```

For gmaps:
```
python -m pip install gmaps
conda install -c conda-forge googlemaps
```

For ipywidgets:
```
python -m pip install ipywidgets
conda install -c conda-forge ipywidgets
```

In the function of 'genrate_seismic_data_plots' we acquire and configure an API key from Google Maps to access its data, we need authorization which can be done by creating an API key.

> 1. To get an API key create a project in console.cloud.google.com
> 2. Enable required API services for the project - we enabled maps_backend, geocodin_backend etc
> 3. Generate API key - starts with AI
> 4. Configure the API key in code when using it.

Product Intro

> The main purpose of this product is to help predict climate change and have a better understanding of the trend of migration changes across the years. The project idea is inspired by the frequent floods that happened in Pakistan, we feel like by the same time of reaching out for help, and a better understanding of how the climates affect the country and how the residents react to it is more crucial. Organizations or help outside of the countries can make their resources or rescue more at ease.

> There are three main functions provided in the application.

> 1. Seismic Events Analyzer
> 2. Flood Occurence and Weather Forecast
> 3. Enviornmental Dislocation Forecasting