Read me

There are 4 items associated with this project.

i. Read me → describe how everything works
ii. Project report
iii. Shrestha_sujan_warta_crystal_project_SourceCode folder →
   a. contains Shrestha_sujan_warta_crysatal_ipynb folder for python code with necessary files such as accident repo..json key to access the firebase db.
   b. contains Accident_repo_visualization folder which has all the necessary code and files for visualization.

<u>Accessing the firebase real time database</u>

You will need a json key file to access the db. The key has been provided to you along with rest of the files inside *shrestha_sujan_warta_crystal_project_ipynb folder.*

1. At first, mount the drive using following or just run the section mounting drive from the submitted *.ipynb file

```
from google.colab import drive
drive.mount('/content/drive')
```

2. At the time of running the. ipynb file, copy the accident repo..json key file into the same folder as the *. Ipynb file. *(.ipynb file uses the service json key file so make sure to update the path inside this file too!)*

Where to update the path ??

<u>In section 2: *Using firebase_admin module to connect to firebase database.*</u>
Update the path to the accident repo..json key file.

a. `cred = credentials.Certificate(‘path to accident_repo..json file ’)`

That should give you the ability to access to firebase real time database!

You will notice that the when running **<u>section2: connect_to_firebase_db()</u>** , it will print initialized if the connection to the database was successful!

The result obtained from Data modeling and clustering such as silhouette scores per cluster, cluster sizes vs cluster, feature 1 vs feature1 analysis result for first 100000 data from our database has been stored in our web app in the form of csv and values inside variables to make the visualization simpler and easy.