Data Collection

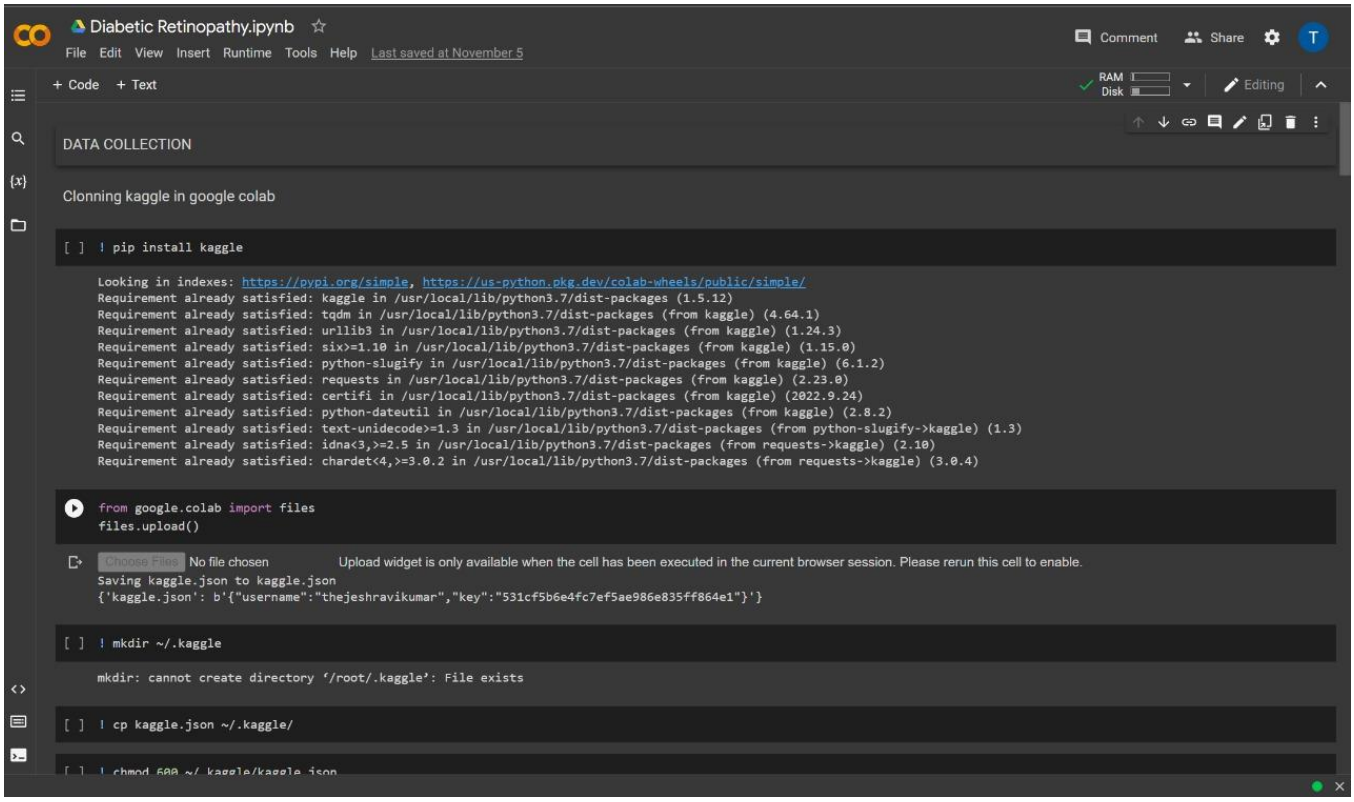
Dataset Download:

The dataset is downloaded from kaggle link :

https://www.kaggle.com/datasets/arbethi/diabetic-retinopathy-level-detection

select = preprocessed + dataset

Kaggle package in Python is installed to collect the dataset from the source.



Download the dataset Kaggle:

```
In [5]: from google.colab import files
        files.upload()
```

Upload widget is only available when the cell has been executed in the current browser session. Please rerun this cell to enable.

```
Saving kaggle.json to kaggle.json
Out[5]: {'kaggle.json': b'{"username":"thejeshravikumar","key":"531cf5b6e4fc7ef5ae986e835ff864e1"}'}
```

```
In [6]: ! mkdir ~/.kaggle
```

```
mkdir: cannot create directory '/root/.kaggle': File exists
```

```
In [7]: ! cp kaggle.json ~/.kaggle/
```

```
In [8]: ! chmod 600 ~/.kaggle/kaggle.json
```

Create Training and Testing path:

Creating Training And Testing Path

```
[13]: imageSize = [299,299]
      trainPath = r"/content/preprocessed dataset/preprocessed dataset/training"
      testPath = r"/content/preprocessed dataset/preprocessed dataset/testing"
```

To build a DL model we have to split training and testing data into two separate folders. But In the project dataset folder training and testing folders are presented. So, in this case we just have to assign avariable and pass the folder path to it.

Four different transfer learning models are used in our project and the best model (Xception) is selected.The image input size of xception model is 299, 299.