

# Configuration Manual

MSc Research Project  
MSc in Data Analytics

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# Configuration Manual

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## 1 Download Airline Passenger Satisfaction Dataset from Kaggle

1. You can access the dataset using the following link

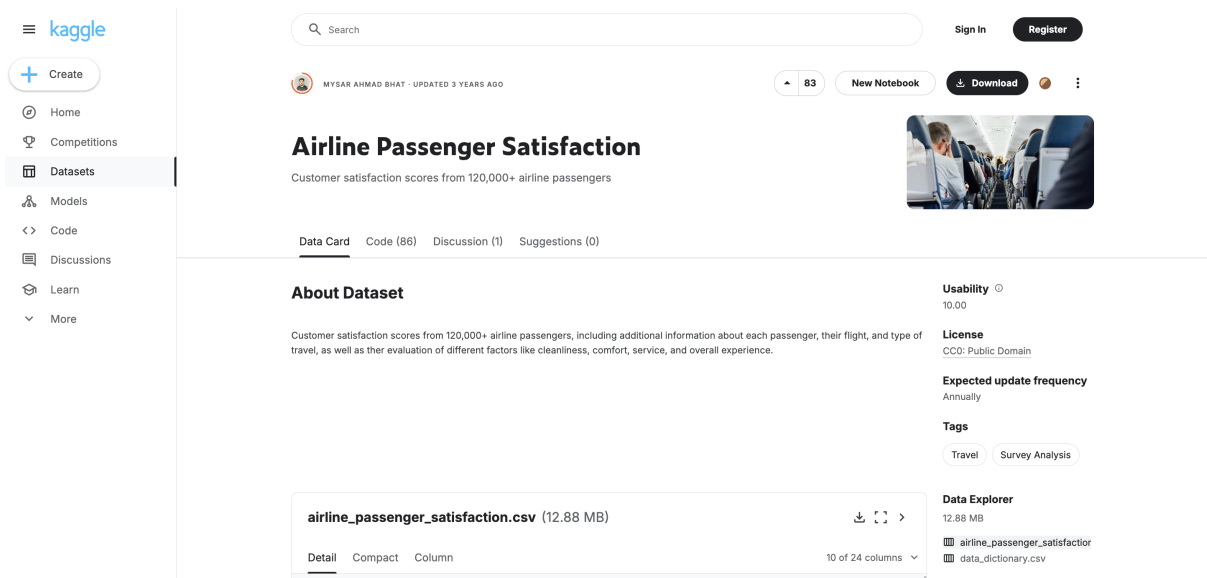


Figure 1: Airline Passenger Dataset

## 2 Google Colab Setup

### 2.1 Choose Plan

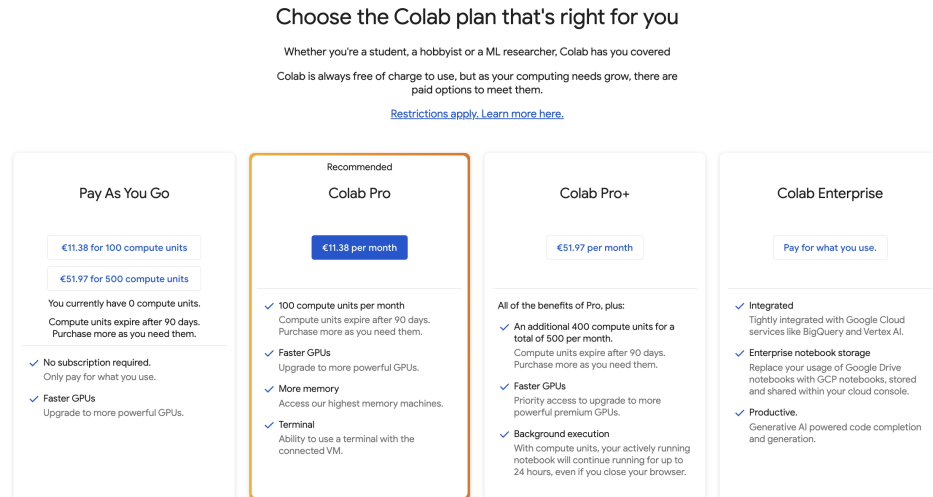


Figure 2: Choose Google Colab Pro

Buy Colab Pro (as shown in Figure 7) from the list of subscriptions in Google, which will be used further to run the code.

### 2.2 Getting started with Colab

1. Upload the code to Colab.
2. Change the runtime type:
  - Navigate to Runtime → Change runtime type.
  - Choose T4 GPU as the hardware accelerator Click on Save.

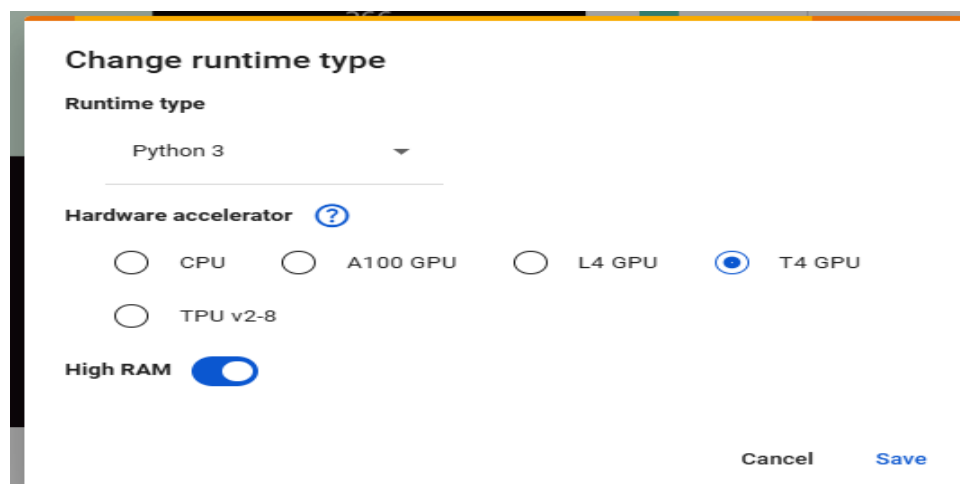


Figure 3: Runtime Type

### 3. Connect to Google Drive:

- Mount your Google Drive to Colab to access the data file.

#### Mount Google drive, Import libraries

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

Figure 4: Google Drive Connection

### 4. Prevent Google Colab from disconnecting:

- Google Colab automatically disconnects after a while, to handle this, right-click on the page and inspect. Then go to the console and run the following script (see Figure 5).

```
> function ClickConnect(){
  console.log("Clicked on connect button");
  document.querySelector("colab-connect-button").click()
}
setInterval(ClickConnect,60000)
```

Figure 5: Javascript code to keep Google Colab connection alive

### 5. Locate the data file:

- Once mounted, files and folders in Google Drive will appear in the side menu (see Figure 6).
- Locate the data file, copy its file path, and ensure it is accurate.

The screenshot shows the Google Colab interface. On the left, the 'Files' sidebar displays the mounted Google Drive structure. The path to the data file is highlighted: `drive > MyDrive > Research Project NCI > Final_code.ipynb > Research_Project_Final_Code_Thanm... > airline_passenger_satisfaction.csv`. A context menu is open over the file, with 'Copy path' selected. The main code editor shows the following code:

```
> Mount Google drive, Import libraries

[ ] 4 cells hidden

> Reading the data file

[5] data= pd.read_csv('/content/drive/MyDrive/Research Project NCI/airline_passenger_satisfaction.csv')
print("Number of Rows :", data.shape[0])
print("Number of Columns :", data.shape[1])

Number of Rows : 129880
Number of Columns : 24
time: 1.1 s (started: 2024-12-08 13:11:23 +00:00)

[6] data.head()
```

Below the code, a preview of the data is shown as a table with 24 columns and 5 rows displayed:

|   | ID | Gender | Age | Customer Type | Type of Travel | Class    | Flight Distance | Departure Delay | Arrival Delay | Departure and Arrival Time Convenience | ... | On-board Service | Seat Comfort | Leg Room Service | Cleanliness | Food and Drink | In-flight Service | In-flight Wifi Service | In-flight Entertainment | Baggage Handling | Satisfaction            |
|---|----|--------|-----|---------------|----------------|----------|-----------------|-----------------|---------------|--|-----|------------------|--------------|------------------|-------------|----------------|-------------------|------------------------|-------------------------|------------------|-------------------------|
| 0 | 1  | Male   | 48  | First-time    | Business       | Business | 821             | 2               | 5.0           | 3                                      | ... | 3                | 5            | 2                | 5           | 5              | 5                 | 3                      | 5                       | 5                | Neutral or Dissatisfied |
| 1 | 2  | Female | 35  | Returning     | Business       | Business | 821             | 26              | 39.0          | 2                                      | ... | 5                | 4            | 5                | 5           | 3              | 5                 | 2                      | 5                       | 5                | Satisfied               |
| 2 | 3  | Male   | 41  | Returning     | Business       | Business | 853             | 0               | 0.0           | 4                                      | ... | 3                | 5            | 3                | 5           | 5              | 3                 | 4                      | 3                       | 3                | Satisfied               |
| 3 | 4  | Male   | 50  | Returning     | Business       | Business | 1905            | 0               | 0.0           | 2                                      | ... | 5                | 5            | 5                | 4           | 4              | 5                 | 2                      | 5                       | 5                | Satisfied               |
| 4 | 5  | Female | 49  | Returning     | Business       | Business | 3470            | 0               | 1.0           | 3                                      | ... | 3                | 4            | 4                | 5           | 4              | 3                 | 3                      | 3                       | 3                | Satisfied               |

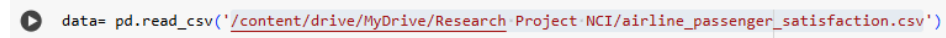
5 rows x 24 columns  
time: 45.9 ms (started: 2024-12-08 13:11:24 +00:00)

Figure 6: Data file location

## 6. Replace the file path in the code:

- Update the code snippet in the "Reading the file" section with the copied path:

### ✓ Reading the data file



```
data= pd.read_csv('/content/drive/MyDrive/Research Project NCI/airline_passenger_satisfaction.csv')
```

Figure 7: File path

## 7. Run all cells:

- Navigate to Runtime → Run all to execute all cells in the notebook.