# User Guide for Global Learning Trend Project

To have a reproducible data ecosystem, we have created a comprehensive data channel from data processing to data visualisation. We have three tables in total, global exchange table for Linda, the faculty and insurance table for Kane.
Here is a tutorial on how to use it.

## 1.Get raw data

In order to produce our data visualisation, we need to ensure all the initial tables from terra dotta contain the columns we want.(as mentioned below). It doesn't matter if there are more irrelevant features. However, before moving on to the next step, make sure the table contains all the column names listed. There are also two additional tables, one recording the QS rankings and one recording all the CITIES and corresponding COUNTRIES in the world.

### Global Exchange

```
["Program", "Year", "Term", "Status", "Program Date Record: Start Date","Program Date Record: End Date", "Program Currently Assigned City","Program Currently Assigned Country", "Program Type", "Student ID","Country of Citizenship", "Degree Program 1","Degree Program 2","Points Completed – Total", "Weighted Average", "Postgraduate flag"]
```

### Faculty

```
['Year', 'Program', 'Placement Location – City', 'Placement Location – State', 'Placement Location – Country', 'Placement Start Date', 'Placement End Date', "Country of Citizenship", 'ID#']
```

### Insurance

```
['Year', 'Itinerary','Student ID','Purpose of Travel','Does your complete journey exceed 365 days?','Level of Study','Faculty','Date of Departure','Date of Return’]
```

### QS2023.csv

Record the QS rankings for 2023, please be careful if you want to update the ranking, an error message might pop up if you were using a different data structure of the rankings.If you wish to update, please download the ranking in CSV table and modify it strictly according to the following requirements.

- Columns need include: ‘Rank’, and ‘institution’.
- The rank should all be integer numbers.
- The institution should be a string that records the school name.

### worldcities.xlsx

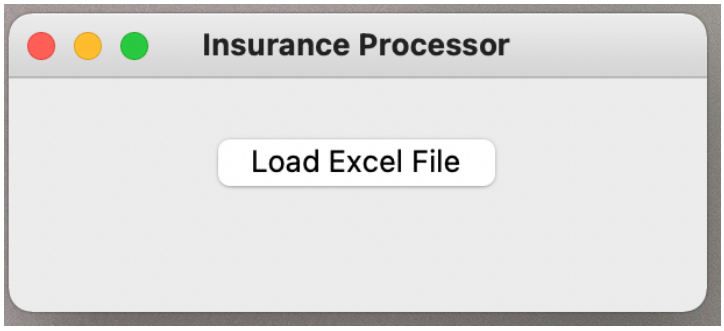
Recording all the CITIES and corresponding COUNTRIES in the world. This Excel is for standardising country and city names and fixing manual input errors. It is in ASCII format, and no update is required.

## 2.Cleaning the initial data

Before visualising the data, data cleaning and data engineering are required. For each dataset, the program has been packaged into an exe file, which is only suitable for Mac.

1) Double-click the target exe file/py file, wait for some time. (If it say this is an external file and you can't open it, please **right-click** on it and select **open with "Terminal"**, then click Trust. It should jump to step 2 shortly.)
(Notice: The Global_Exchange_L takes about 5 minutes. It doesn't mean any error.)


2) Then pop-up window will appear. According to the pop-up window, select the path of the original table, if it does not meet the requirements, it will ask to re-enter.
Notice the requirement files:




Globel_Exchange_L: Need to input Global Exchange File (.xlsx) and QS2023.csv
faculty_processing: Need to input faculty data (.xlsx) and worldcities.xlsx
Insurance_processing: Need to input insurance data (.xlsx)

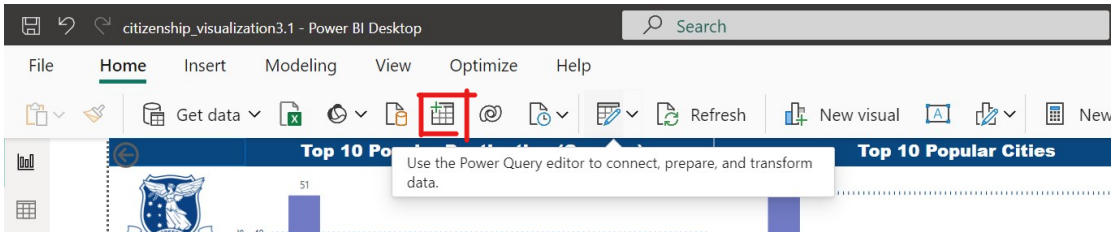
Note: For faculty_processing & Globel_Exchange_L they need both files mentioned for each data to run successfully.

3) After entering the table correctly, wait for a while, and a pop-up window will appear to save the file. Please choose the appropriate path to save, then you get the processed data ready to put into Powerbi.

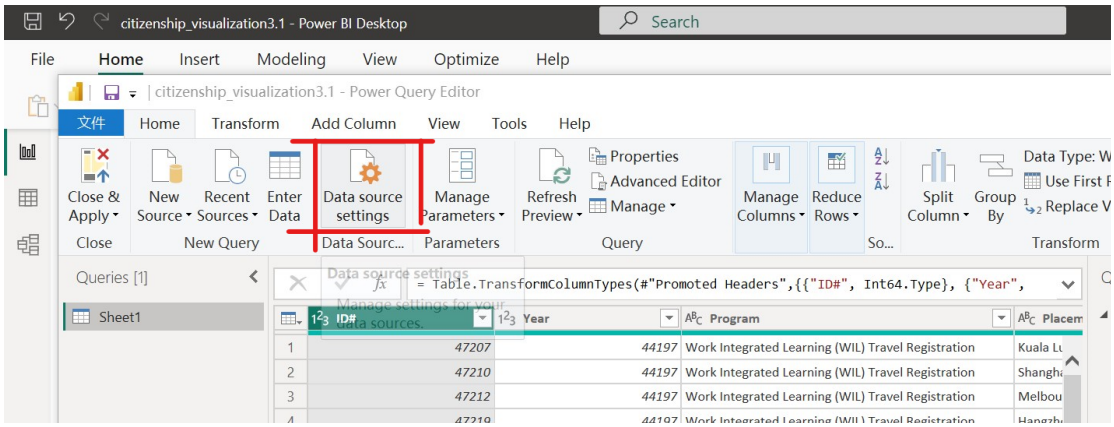
## 3.Change the PowerBI data

Follow the steps below; new data will be loaded in the Powerbi file. Please notice this step can only be done in Powerbi desktop in **Windows.**

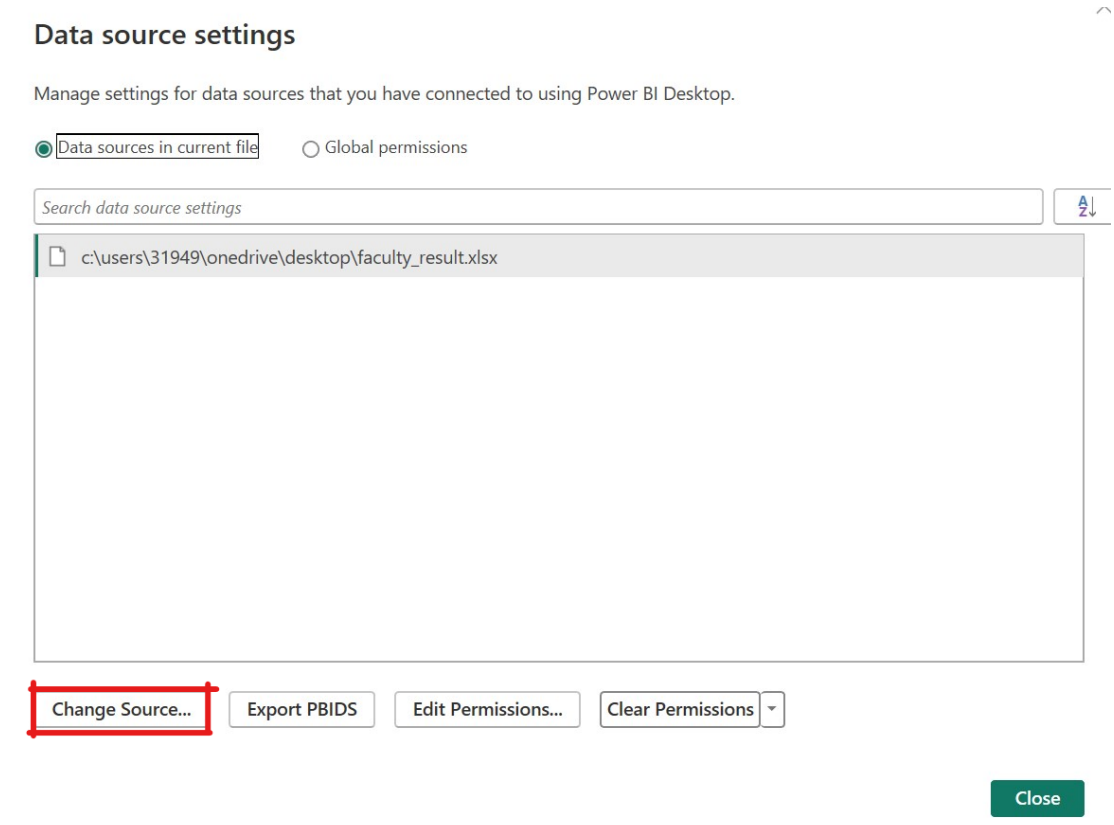
1.


citizenship_visualization3.1 - Power BI Desktop
Search
File
Home
Insert
Modeling
View
Optimize
Help
Get data
Refresh
New visual
Use the Power Query editor to connect, prepare, and transform data.
Top 10 Popular Cities

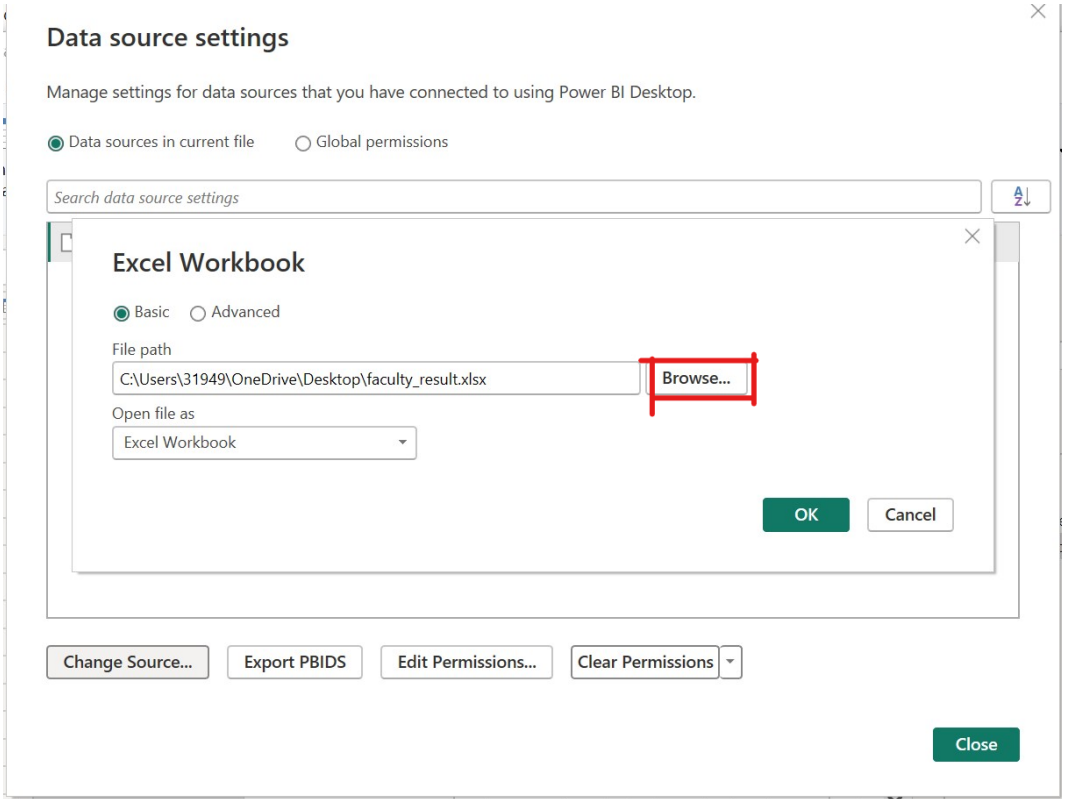
2.


citizenship_visualization3.1 - Power BI Desktop
Search
File
Home
Insert
Modeling
View
Optimize
Help
citizenship_visualization3.1 - Power Query Editor
文件
Home
Transform
Add Column
View
Tools
Help
Close & Apply
New Source
Recent Sources
Enter Data
Data source settings
Manage Parameters
Refresh Preview
Properties
Advanced Editor
Manage
Manage Columns
Reduce Rows
Split Column
Group By
Close
New Query
Data Sourc...
Parameters
Query
Transform
Queries [1]
Sheet1
Data source settings
Manage settings for your data sources.
= Table.TransformColumnTypes(#"Promoted Headers",{{"ID#", Int64.Type}, {"Year",
ID#
Year
Program
1 47207 44197 Work Integrated Learning (WIL) Travel Registration
2 47210 44197 Work Integrated Learning (WIL) Travel Registration
3 47212 44197 Work Integrated Learning (WIL) Travel Registration

3.


Data source settings
Manage settings for data sources that you have connected to using Power BI Desktop.
Data sources in current file
Global permissions
Search data source settings
c:\users\31949\onedrive\desktop\faculty_result.xlsx
Change Source...
Export PBIDS
Edit Permissions...
Clear Permissions
Close

4.




Please remember to save all the changes, and all the visualizations will be updated.