

Antes de comenzar

A continuación, analizaremos la información de los casos de **SARS-COV-2** o mejor conocido como COVID desde los reportes de los primeros casos y hasta 2023. Recordemos que la pandemia tuvo impactos muy grandes a nivel global en todos los aspectos. Estaremos analizando la información de los casos reportados de Covid mediante la fuente de información global, proporcionada por la Universidad Johns Hopkins y que sirvió en su momento para el seguimiento oficial de casos de Coronavirus en todo el mundo.

- Las fuentes de datos vienen en la sección de Anexos, junto con la liga de acceso a cada una de ellas.
- Encontrarás en la parte de paso a paso las instrucciones y procedimientos a realizar
- Contestarás a las preguntas que vienen al final, una vez realizado todos los pasos previos
- El entregable final será un dashboard desarrollado en Power BI, se calificará originalidad en la visualización y despliegue de información

Paso a Paso

Importa los datos de casos confirmados desde Power BI / Excel

Abre el editor de Power Query

File Origin	Delimiter	Data Type Detection
65001: Unicode (UTF-8)	Comma	Based on first 200 rows

Column1	Column2	Column3	Column4	Column5	Column6	Column7	Column8	Column9	Column10	Column11
Province/State	Country/Region	Lat	Long	1/22/20	1/23/20	1/24/20	1/25/20	1/26/20	1/27/20	1/28/20
	Afghanistan	33.93911	67.709953	0	0	0	0	0	0	0
	Albania	41.1533	20.1683	0	0	0	0	0	0	0
	Algeria	28.0339	1.6596	0	0	0	0	0	0	0
	Andorra	42.5063	1.5218	0	0	0	0	0	0	0
	Angola	-11.2027	17.8739	0	0	0	0	0	0	0
	Antigua and Barbuda	17.0608	-61.7964	0	0	0	0	0	0	0

Cambia el nombre de la tabla y usar la primera línea como encabezado

Untitled - Power Query Editor

Archive Home Transform Add Column View Tools Help

Close & Apply Close New Source Sources Recent Data Data source settings Data Sources Manage Parameters Parameters Refresh Preview Advanced Editor Query Choose Columns Manage Columns Remove Columns Remove Rows Reduce Rows Sort Split Column Group By Data Type: Text Use First Row as Headers Replace Values Transform

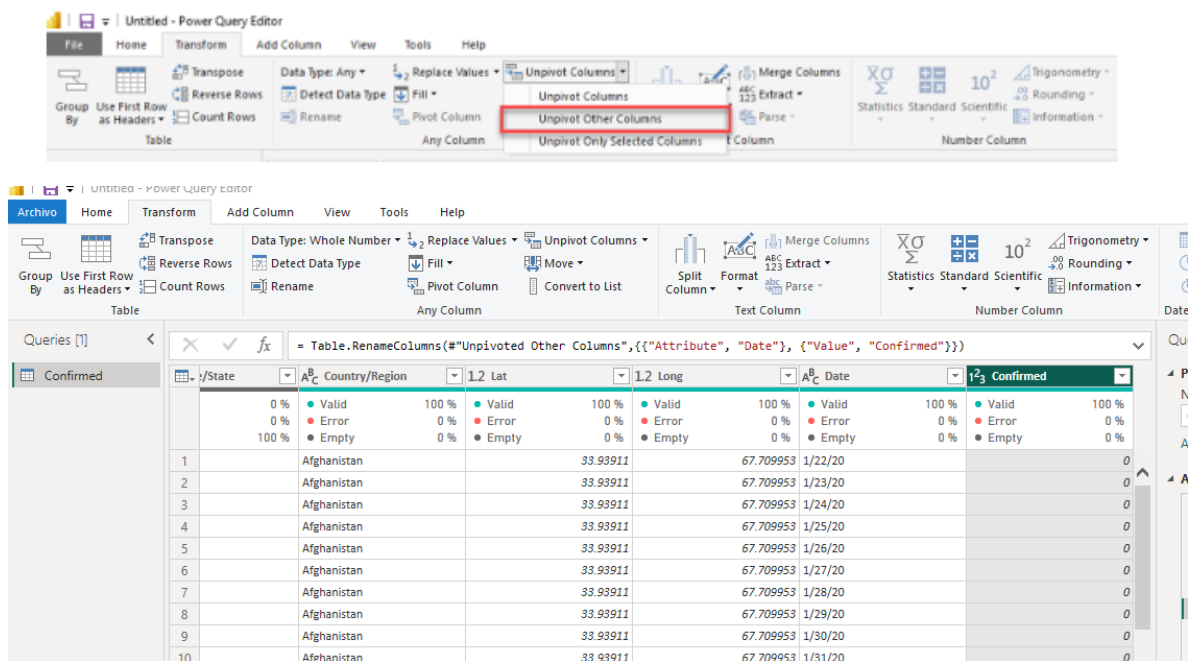
Queries [1]

Confirmed

Table.TransformColumnTypes(#"Promoted Headers",{{"Province/State", type text}, {"Country/Region", type text},

Province/State	Country/Region	1.2 Lat	1.2 Long	1.2 1/22/20	1.2 1/23/20
Valid 31 % Error 0 % Empty 69 %	Valid 100 % Error 0 % Empty 0 %	Valid 99 % Error 0 % Empty < 1 %	Valid 99 % Error 0 % Empty < 1 %	Valid 100 % Error 0 % Empty 0 %	Valid 100 % Error 0 % Empty 0 %
1	Afghanistan	33.93911	67.709953	0	0
2	Albania	41.1533	20.1683	0	0
3	Algeria	28.0339	1.6596	0	0
4	Andorra	42.5063	1.5218	0	0

Despivota a partir de las primeras cuatro columnas



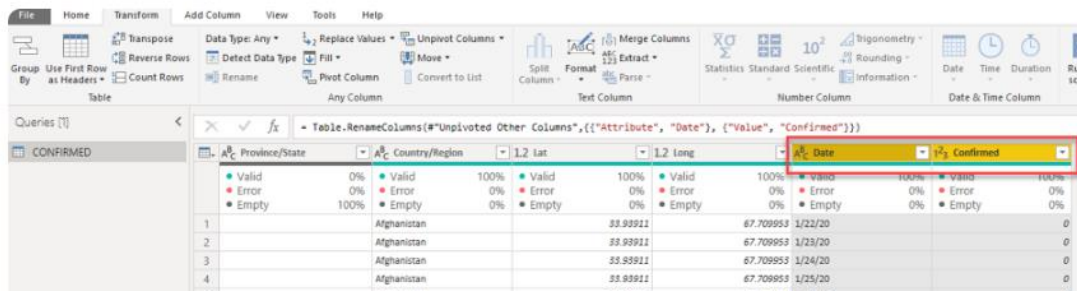
The screenshot shows the Power Query Editor interface. The 'Unpivot Columns' dropdown menu is open, and 'Unpivot Other Columns' is highlighted with a red rectangle. The formula bar shows the following M code:

```
Table.RenameColumns(#"Unpivoted Other Columns",{{"Attribute", "Date"}, {"Value", "Confirmed"}})
```

The data table below shows the result of unpivoting the first four columns (Province/State, Country/Region, Lat, Long) into a single column named 'Date', with the values from the fifth column ('Confirmed') being placed in a new column named 'Confirmed'.

	Province/State	Country/Region	Lat	Long	Date	Confirmed
1	Afghanistan		33.93911	67.709953	1/22/20	0
2	Afghanistan		33.93911	67.709953	1/23/20	0
3	Afghanistan		33.93911	67.709953	1/24/20	0
4	Afghanistan		33.93911	67.709953	1/25/20	0
5	Afghanistan		33.93911	67.709953	1/26/20	0
6	Afghanistan		33.93911	67.709953	1/27/20	0
7	Afghanistan		33.93911	67.709953	1/28/20	0
8	Afghanistan		33.93911	67.709953	1/29/20	0
9	Afghanistan		33.93911	67.709953	1/30/20	0
10	Afghanistan		33.93911	67.709953	1/31/20	0

Nombra las dos últimas columnas



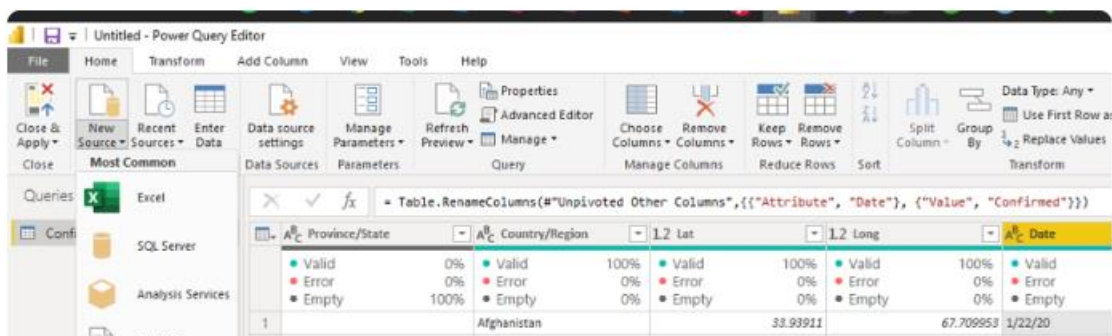
The screenshot shows the Power Query Editor interface. The 'Unpivot Other Columns' option is selected in the 'Unpivot Columns' dropdown menu. The 'Date' and 'Confirmed' columns are highlighted with a red rectangle. The formula bar shows the following M code:

```
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```

The data table below shows the result of unpivoting the first four columns (Province/State, Country/Region, Lat, Long) into a single column named 'Date', with the values from the fifth column ('Confirmed') being placed in a new column named 'Confirmed'.

	Province/State	Country/Region	Lat	Long	Date	Confirmed
1	Afghanistan		33.93911	67.709953	1/22/20	0
2	Afghanistan		33.93911	67.709953	1/23/20	0
3	Afghanistan		33.93911	67.709953	1/24/20	0
4	Afghanistan		33.93911	67.709953	1/25/20	0

Importa los datos de decesos diarios



The screenshot shows the Power Query Editor interface. The 'Unpivot Other Columns' option is selected in the 'Unpivot Columns' dropdown menu. The 'Date' and 'Confirmed' columns are highlighted with a red rectangle. The formula bar shows the following M code:

```
Table.RenameColumns(#"Unpivoted Other Columns",{{"Attribute", "Date"}, {"Value", "Confirmed"}})
```

The data table below shows the result of unpivoting the first four columns (Province/State, Country/Region, Lat, Long) into a single column named 'Date', with the values from the fifth column ('Confirmed') being placed in a new column named 'Confirmed'.

	Province/State	Country/Region	Lat	Long	Date	Confirmed
1	Afghanistan		33.93911	67.709953	1/22/20	0

● Repite los pasos de la tabla de Confirmados (Nombrar la última columna como "Death")

Untitled - Power Query Editor

Archivo Home Transform Add Column View Tools Help

Group By Use First Row as Headers Count Rows

Transpose Reverse Rows

Data Type: Whole Number Replace Values Unpivot Columns

Detect Data Type Fill Move

Pivot Column Convert to List

Split Column Format Merge Columns

Statistics Standard Scientific Rounding Information

Number Column

Queries [2]

Confirmed

Deaths

Table

Table.RenameColumns(#"Unpivoted Other Columns",{"Attribute", "Date"}, {"Value", "Death"})

	Province/State	Country/Region	Lat	Long	Date	Death
1	Afghanistan		33.93911	67.709953	1/22/20	0
2	Afghanistan		33.93911	67.709953	1/23/20	0
3	Afghanistan		33.93911	67.709953	1/24/20	0
4	Afghanistan		33.93911	67.709953	1/25/20	0
5	Afghanistan		33.93911	67.709953	1/26/20	0
6	Afghanistan		33.93911	67.709953	1/27/20	0
7	Afghanistan		33.93911	67.709953	1/28/20	0
8	Afghanistan		33.93911	67.709953	1/29/20	0
9	Afghanistan		33.93911	67.709953	1/30/20	0

● Une las dos tablas resultantes (Join) en una nueva tabla

Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

Close & Apply Recent Sources Enter Data

Data source settings Parameters

Refresh Preview Manage Query

Choose Remove Columns Columns

Keep Remove Rows Rows

Split Column Group By

Data Type: Whole Number

Use First Row as Headers

Replace Values

Merge Queries

Merge Queries as New

Machine Learning Insights

Queries [2]

Confirmed

Deaths

Table.RenameColumns(#"Unpivoted Other Columns",{"Attribute", "Date"}, {"Value", "Death"})

	Province/State	Country/Region	Lat	Long	Date	Death
1	Afghanistan		33.93911	67.709953	1/22/20	0
2	Afghanistan		33.93911	67.709953	1/23/20	0
3	Afghanistan		33.93911	67.709953	1/24/20	0
4	Afghanistan		33.93911	67.709953	1/25/20	0
5	Afghanistan		33.93911	67.709953	1/26/20	0
6	Afghanistan		33.93911	67.709953	1/27/20	0
7	Afghanistan		33.93911	67.709953	1/28/20	0
8	Afghanistan		33.93911	67.709953	1/29/20	0

● Las columnas por las que se van a unir son la de Provincia/Estado, País/Región y Fecha

Merge

Select tables and matching columns to create a merged table.

Confirmed

Province/State	Country/Region	Lat	Long	Date	Confirmed
Afghanistan		33.93911	67.709953	1/22/20	0
Afghanistan		33.93911	67.709953	1/23/20	0
Afghanistan		33.93911	67.709953	1/24/20	0
Afghanistan		33.93911	67.709953	1/25/20	0
Afghanistan		33.93911	67.709953	1/26/20	0

Deaths

Province/State	Country/Region	Lat	Long	Date	Death
Afghanistan		33.93911	67.709953	1/22/20	0
Afghanistan		33.93911	67.709953	1/23/20	0
Afghanistan		33.93911	67.709953	1/24/20	0
Afghanistan		33.93911	67.709953	1/25/20	0
Afghanistan		33.93911	67.709953	1/26/20	0

Join Kind

Left Outer (all from first, matching from second)

☐ Use fuzzy matching to perform the merge

Fuzzy matching options

Estimating matches based on data previews

OK Cancel

- Traer la columna de Deaths de la tabla de decesos y nombrar la tabla resultante

The screenshot shows the Power Query Editor interface. The main table has columns: Province/State, Country/Region, Lat, Long, Date, Confirmed, and Deaths. A dialog box titled 'Expand Columns' is open, showing the 'Deaths' column selected for expansion. The 'Use original column name as prefix' checkbox is checked.

- Usa la misma metodología para unir los datos de los casos recuperados.

The screenshot shows the Power Query Editor interface. The main table has columns: Province/State, Country/Region, Lat, Long, Date, Confirmed, Deaths, and Recovered. A dialog box titled 'Expand Columns' is open, showing the 'Recovered' column selected for expansion. The 'Use original column name as prefix' checkbox is checked.

• Crea la métrica para Casos Confirmados

The screenshot shows the Power BI Desktop interface. The 'Name' field is set to 'Total Confirmed'. The 'Format' is set to 'Whole number'. The 'Data category' is set to 'Uncategorized'. The 'Home table' is set to 'Covid19'. The formula bar shows the following DAX formula:

```
1 Total Confirmed =
2 IF(
3     SUM(Covid19[Confirmed]) = 0,
4     BLANK(),
5     SUM(Covid19[Confirmed])
6 )
```

The resulting data table is shown below:

Province/State	Country/Region	Lat	Long	Date	Confirmed	Deaths	Recovered
Tuvalu	177.6493	-7.1095	1/22/20	0	0	0	
Tuvalu	177.6493	-7.1095	1/23/20	0	0	0	
Tuvalu	177.6493	-7.1095	1/24/20	0	0	0	
Tuvalu	177.6493	-7.1095	1/25/20	0	0	0	
Tuvalu	177.6493	-7.1095	1/26/20	0	0	0	
Tuvalu	177.6493	-7.1095	1/27/20	0	0	0	
Tuvalu	177.6493	-7.1095	1/28/20	0	0	0	
Tuvalu	177.6493	-7.1095	1/29/20	0	0	0	
Tuvalu	177.6493	-7.1095	1/30/20	0	0	0	
Tuvalu	177.6493	-7.1095	1/31/20	0	0	0	
Tuvalu	177.6493	-7.1095	2/1/20	0	0	0	
Tuvalu	177.6493	-7.1095	2/2/20	0	0	0	
Tuvalu	177.6493	-7.1095	2/3/20	0	0	0	
Tuvalu	177.6493	-7.1095	2/4/20	0	0	0	
Tuvalu	177.6493	-7.1095	2/5/20	0	0	0	
Tuvalu	177.6493	-7.1095	2/6/20	0	0	0	



Crea una tabla Calendario para el Modelo de Datos

El Data Type estaba en Date/Time, lo cambiamos a “Date”

The screenshot shows the Microsoft Power BI Desktop interface. The 'Column tools' ribbon is active, displaying options for Name, Data type, Format, Summarization, Data category, Sort by column, Data groups, Manage relationships, and New column. The 'Date' column in the 'Calendar' table is selected, and its data type is set to 'Date'. The 'Data' pane on the right shows the 'Calendar' table with columns: Date, Confirmed, Deaths, and Recovered.

Se crea la relación de tablas Covid19 ↔ Calendario por el campo Date.

Edit relationship

Select tables and columns that are related.

From table

Covid19

Confirmed	Country/Regi...	Date	Deaths	Lat	Long	Province/S
0	Tuvalu	1/22/20	0	-7.1095	177.6493	
0	Tuvalu	1/23/20	0	-7.1095	177.6493	
0	Tuvalu	1/24/20	0	-7.1095	177.6493	

To table

Calendar

Date
01/01/2021 1...
02/01/2021 1...
03/01/2021 1...

Cardinality

Many to one (*:1)

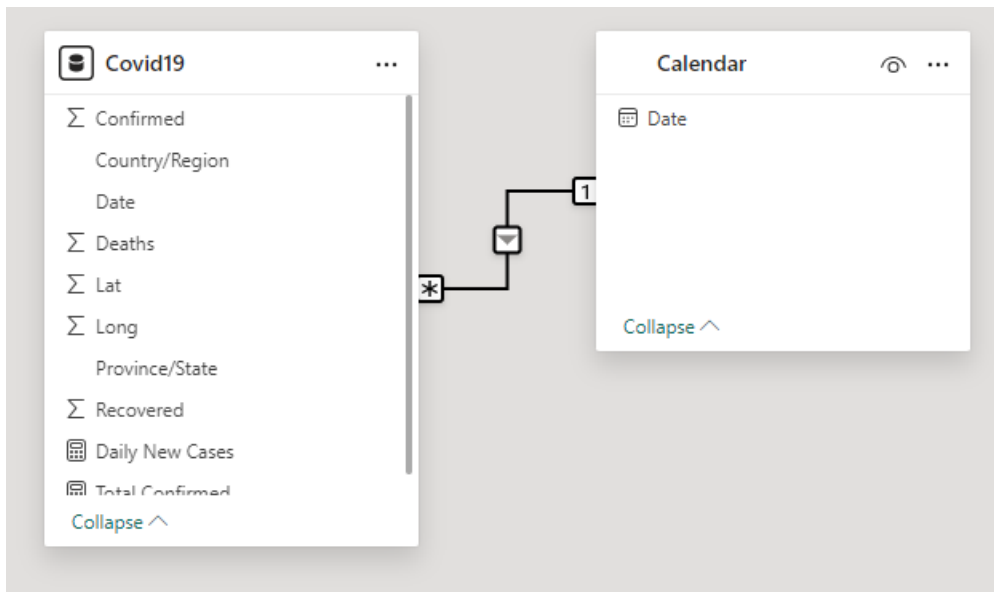
Cross-filter direction

Single

☒ Make this relationship active

☐ Apply security filter in both directions

☐ Assume referential integrity



• Crea una métrica para el total de muertes

File Home Insert Modeling View Help Table tools Measure tools

Name: Total Deaths Format: Whole number Data category: Uncategorized

Home table: COVID-19

Structure Formatting Properties Calculations

```
1 Total Deaths =
2 VAR DEATHS =
3     SUMX(
4         VALUES('COVID-19'[Country/Region]),
5         SUMX(
6             VALUES('COVID-19'[Province/State]),
7             CALCULATE(
8                 MAX('COVID-19'[Deaths]))
9         )
10    )
11 RETURN
12 IF(DEATHS = 0, BLANK(), DEATHS)
```



Crea la métrica para Casos Diarios

Name

Daily New Cases

Format

Whole number

Data category

Uncategorized

New measure

Quick measure

Home table

Covid19

Formatting

Properties

Calculations

1

Daily New Cases =

2

VAR Current_Day =

3

[Total Confirmed]

4

VAR Previos_Day =

5

CALCULATE([Total Confirmed],

6

DATEADD('Calendar'[Date], -1, DAY)

7

)

8

RETURN

9

IF(ISBLANK(Previos_Day), BLANK(), Current_Day - Previos_Day)

Province/State	Country/Region	Lat	Long	Date	Confirmed	Deaths	Recovered
Tuvalu	-7.1095	177.6493	1/22/20	0	0	0	
Tuvalu	-7.1095	177.6493	1/23/20	0	0	0	
Tuvalu	-7.1095	177.6493	1/24/20	0	0	0	
Tuvalu	-7.1095	177.6493	1/25/20	0	0	0	
Tuvalu	-7.1095	177.6493	1/26/20	0	0	0	
Tuvalu	-7.1095	177.6493	1/27/20	0	0	0	
Tuvalu	-7.1095	177.6493	1/28/20	0	0	0	
Tuvalu	-7.1095	177.6493	1/29/20	0	0	0	
Tuvalu	-7.1095	177.6493	1/30/20	0	0	0	
Tuvalu	-7.1095	177.6493	1/31/20	0	0	0	
Tuvalu	-7.1095	177.6493	2/1/20	0	0	0	
Tuvalu	-7.1095	177.6493	2/2/20	0	0	0	
Tuvalu	-7.1095	177.6493	2/3/20	0	0	0	
Tuvalu	-7.1095	177.6493	2/4/20	0	0	0	

Data

Search

> Calendar

> Confirmed

> Covid19

> Confirmed

> Country/Region

> Daily New Cases

> Date

> Deaths

> Lat

> Long

> Province/State

> Recovered

> Total Confirmed

> Total deaths

> Deaths

> Recovered



A partir de lo anterior se tiene que contestar las siguientes preguntas:

1.- ¿Cuáles son los 10 países con más contagios?

Top 10 países con más Contagios	
Country/Region	Total Confirmed
US	53813184406
India	29131119694
Brazil	21182990594
France	16105911886
Germany	13686043720
United Kingdom	12118271679
Russia	10578569842
Italy	10083161678
Turkey	8840742699
Korea, South	8467888968
Total	184007585166

2.- ¿Cuáles con los 10 países con más decesos?

Top 10 Países con más Decesos	
Country/Region	Total deaths
US	713877215
Brazil	488181000
India	364921237
Mexico	241085189
Russia	220983590
Peru	170749849
United Kingdom	160836677
Italy	127936784
France	113410357
Colombia	100671637
Total	2702653535

3.- ¿Cuál es mi tasa de mortalidad y cuáles son los 10 países con la tasa de mortalidad más alta?

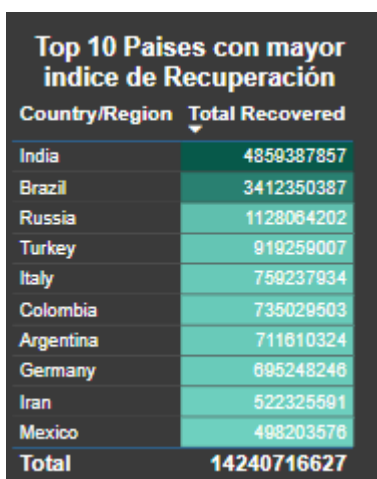
Tasa de Mortalidad Global
1.39 %

Top 10 Tasa Mortalidad más Alta	
Country/Region	Mortality Rate
Korea, North	600.00 %
MS Zaandam	22.20 %
Yemen	19.23 %
Sudan	7.41 %
Peru	6.83 %
Mexico	6.11 %
Syria	5.86 %
Egypt	5.16 %
Somalia	5.03 %
Ecuador	4.53 %
Total	6.20 %

4.- ¿Cuáles son los 10 países con la tasa de mortalidad más baja?



5.- Siguiendo la misma lógica puedes decir ¿Cuáles son los países con mayor índice de recuperación?



6.- ¿Cómo se ve la curva de contagios diarios para México?

