Travel Patterns

Getting started

Travel Patterns shows the number of Facebook users who move between countries each day. We use data from the people who choose to share their Location Services data with the Facebook app and sum those that have moved across long distances, like via cross-country air or train travel.

Who is this dataset useful for?

Travel Patterns is useful for epidemiologists and economists who wish to understand topics such as the impact of international travel on disease spread or the anticipated economic effects of decreased travel during public health emergencies and other events.

Questions the dataset can help answer

- How many people are moving between countries each day?
- How much are travel industries such as the airline industry affected by a crisis event?

Features of Travel Patterns maps

- Updated every day wherever there are enough people using the Facebook app to ensure privacy
- Built using a standard methodology for the entire globe
- Available as a simple csv file that is easy to analyze

Codebook

These take the form human-friendly metric name (metric name in csv).

`Date (ds)`: The date when the travel occurred and metrics were generated, in YYYY/MM/DD format

`Origin ID number (polygon1_id)`: A unique number for the country where travel originated

`Origin country (polygon1_name)`: The country of origin for travel. We use the country boundaries and names provided by the GADM project.

`Origin latitude (latitude1)`: The latitude coordinate of the centroid of the country of origin for travel

`Origin longitude (longitude1)`: The longitude coordinate of the centroid of the country of origin for travel

`Destination ID number (polygon2_id)`: A unique number for the destination country

`Destination country (polygon2_name)`: The destination country. We use the country boundaries and names provided by the GADM project.

`Destination latitude (latitude2)`: The latitude coordinate of the centroid of the destination country

`Destination longitude (longitude2)`: The longitude coordinate of the centroid of the destination country

`People traveling (metric_value)`: The number of Facebook users who have moved from the origin country to the destination country during the date defined in **date**

Data standards

`Population sample`: Travel Patterns draws from a sample of Facebook mobile app users who have enabled the Location Services setting. More info on Location Services on Facebook can be found here.

`Spatial aggregation`: Travel Patterns aggregates to the country level. We use the territorial boundaries and names provided by the GADM project.

`Temporal aggregation`: Travel Patterns data is updated daily. The metric is reported for travel that took place during the 24-hour period defined by the **Date** value.

`Minimum counts/size`: There must be at least 1,000 Facebook users sharing their Location Services data who went from the origin to the destination each day, otherwise the data is excluded in order to protect privacy.

`File format`: Data is provided in a global comma-delimited text file.

Case studies

- International risk of the new variant COVID-19 importations originating in the United Kingdom
- UK coronavirus variant likely circulated undetected in US for months, researchers say

Further reading

- Facebook Travel Patterns Overview

Example view of data

Travel Patterns (Edges)
Mar 24, 2020 – Jan 29, 2024 • Global • Travel Patterns

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ds	polygon1_id	polygon1_name	latitude1	longitude1	polygon2_id	polygon2_name	latitude2	longitude2	metric_value	metric_name
2024-01-29	123181077032...	poland	52.0	19.0	833225000389...	slovakia	49.0	20.0	5660	travel counts
2024-01-29	417158592211...	india	21.0	77.0	146208133726...	bhutan	27.45	90.5	6972	travel counts
2024-01-29	210384260657...	chile	-31.0	-71.0	921744301497...	argentina	-34.0	-64.0	7646	travel counts
2024-01-29	661116984348...	el salvador	13.668889	-88.866111	121207230230...	guatemala	15.5	-90.25	4030	travel counts
2024-01-29	475814519825...	belgium	51.0	5.0	108026573551...	spain	40.0	-3.0	2921	travel counts
2024-01-29	852597565113...	united kingdom	54.0	-2.0	429706144459...	malta	35.8854	14.4302	1155	travel counts
2024-01-29	351886962112...	italy	43.0	12.0	429706144459...	malta	35.8854	14.4302	2111	travel counts
2024-01-29	241472082859...	romania	46.0	25.0	108026573551...	spain	40.0	-3.0	1764	travel counts
2024-01-29	417045315510...	czech republic	50.0	16.0	833225000389...	slovakia	49.0	20.0	15538	travel counts
2024-01-29	616857608787...	hungary	47.0	19.0	833225000389...	slovakia	49.0	20.0	6613	travel counts
2024-01-29	228261943862...	austria	48.0	14.0	833225000389...	slovakia	49.0	20.0	3906	travel counts
2024-01-29	535485520310...	cyprus	35.0	33.0	224728933533...	turkey	39.0	36.0	2138	travel counts
2024-01-29	937148070010...	united states	40.0	-100.0	224728933533...	turkey	39.0	36.0	1161	travel counts
2024-01-29	407219260067...	bulgaria	42.75	25.5	224728933533...	turkey	39.0	36.0	5118	travel counts
2024-01-29	680120905754...	france	47.0	2.0	224728933533...	turkey	39.0	36.0	1058	travel counts
2024-01-29	806572816378...	tunisia	34.0	9.0	680120905754...	france	47.0	2.0	2407	travel counts
2024-01-29	417045315510...	czech republic	50.0	16.0	680120905754...	france	47.0	2.0	1205	travel counts