Package ‘airportr’

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Type Package

Title Convenience Tools for Working with Airport Data

Version 0.1.3

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Description Retrieves open source airport data and provides tools to look up information, translate names into codes and vice-verse, as well as some basic calculation functions for measuring distances. Data is licensed under the Open Database License.

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Encoding UTF-8

LazyData true

Imports dplyr

Depends R(>= 2.10.0)

URL https://github.com/dshkol/airportr

BugReports https://github.com/dshkol/airportr/issues

RoxygenNote 6.1.1

Suggests knitr, rmarkdown

VignetteBuilder knitr

NeedsCompilation no

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R topics documented:

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Package to work with airport data

See the README on GitHub

A dataset containing names, codes, locations, altitude, and timezones for airports

airports

A data frame with 7698 rows and 14 variables:

- **OpenFlights ID** OpenFlights database ID
- **Name** Airport name, sometimes contains name of the city
- **City** Name of city served by airport
- **IATA** 3-letter IATA code
- **ICAO** 4-letter ICAO code
- **Country** Country name as in OpenFlights database. Note that country names may not be ISO 3166-1 standard.
- **Country Code** ISO 3166-1 numeric country code
- **Country Code (Alpha-2)** Name of city served by airport
- **Country Code (Alpha-3)** Name of country where airport is located
- **Latitude** Latitude in decimal degrees
airports_around

**Longitude**  Longitude in decimal degrees

**Altitude**  Altitude in feet

**UTC**  Hours offset from UTC

**DST**  Daylight savings time. One of E (Europe), A (US/Canada), S (South America), O (Australia), Z (New Zealand), N (None) or U (Unknown)

**Timezone**  Timezone in Olson format

**Type**  Type of airport

**Source**  Source of data. Airport data generally sourced from OurAirports

**Source**

https://openflights.org/data.html

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**airports_around**  
*Lookup airports near specified coordinates*

**Description**

A function that returns details of all airports within a user-specified distance of an input coordinate location. Takes as input a longitude and latitude argument.

**Usage**

airports_around(lat, lon, distance = 100)

**Arguments**

- **lat**  Latitude in decimal degrees
- **lon**  Longitude in decimal degrees
- **distance**  Distance boundary for nearest airport lookup in kilometres

**Value**

A tibble of airports that fall within the specified range of specified location

**Examples**

airports_around(-123, 49.2)

# Or with a user specified distance in kilometres
airports_around(-123, 49.2, distance = 200)
airports_near_airport  Lookup airports nearby other airports

Description
A function that returns details of airports within a user-specified distance of a given airport.

Usage
airports_near_airport(input, distance = 100)

Arguments
input  An airport name, IATA code, or ICAO code. Input type will be guessed unless explicitly defined
distance  Distance boundary for nearest airport lookup in kilometres

Value
A tibble of airports that fall within the specified range of input airport

Examples
airports_near_airport("YVR")

# Or with a user specified distance in kilometres
airports_near_airport("YVR", distance = 200)

airport_detail  Lookup full airport details based of a standard airport input

Description
Return all airport details given an input IATA code, ICAO code, or airport name.

Usage
airport_detail(input, input_type)

Arguments
input  An airport name, IATA code, or ICAO code. Input type will be guessed unless explicitly defined
input_type  One of "name", "IATA", or "ICAO". Function will attempt to guess type if not supplied
airport_distance

Value

A 1x14 tibble with airport details

Examples

airport_detail("YVR")
airport_detail("London Heathrow Airport")

airport_distance

Calculate great circle distance between two airports

Description

A function that calculates distances between pairs of airport codes. Distances are calculated using the Haversine formula which assumes a spherical earth. Distances are returned in kilometres.

Usage

airport_distance(airport1, airport2)

Arguments

airport1 Takes a three-letter IATA code corresponding to an airport
airport2 As above

Value

The great circle distance in kilometres between the two airports

Examples

airport_distance("YVR","YYZ")

airport_location

Lookup airport location coordinates given a standard airport input.

Description

Returns airport location in longitude and latitude coordinates given an input IATA code, ICAO code, or airport name.

Usage

airport_location(input, input_type)
airport_lookup

Arguments

input          An airport name, IATA code, or ICAO code. Input type will be guessed unless
               # explicitly defined
input_type     One of "name", "IATA", or "ICAO". Function will attempt to guess type if not
               supplied

Value

List of longitude and latitude coordinates

Examples

airport_location("YVR","IATA")
# airport_location("Vancouver International Airport","name")

airport_lookup(input, input_type = "IATA", output_type = "name")

Arguments

input          An airport name, IATA code, or ICAO code. Input type will be guessed unless
               # explicitly defined
input_type     One of "name", "IATA", or "ICAO". Function will attempt to guess type if not
               supplied
output_type    One of "name", "city", "IATA", or "ICAO". Defaults to "name" if otherwise not
               specified

Value

The appropriate city, airport name, IATA code, or ICAO code for that airport

Examples

airport_lookup("CYVR")
airport_lookup("YVR", output_type = "city")
airport_lookup("Vancouver International Airport", input_type="name",output_type = "IATA")
airport_lookup("YVR",input_type = "IATA", output_type = "city")

# Produces a list of similar named airports
airport_lookup("Vancoover","name","city")
Description
This function takes a city normal city name as an input argument and returns all airports associated with that city. Airports are typically associated with their local metropolitan area but some exceptions may be present in the data. If there are no matching results in the data for the city argument, a list of closely named alternatives will be suggested with a warning.

Usage
```r
city_airports(city, country)
```

Arguments
- `city` A city name. If no exact match will attempt to prompt user with suggested alternatives.
- `country` (Optional) A country name or ISO country code in either numeric, alpha-2, or alpha 3 format. Case insensitive.

Value
A Nx17 tibble with airport details where n is the number of airports serving that city.

Examples
```r
city_airports("Vancouver")
city_airports("London")
city_airports("London","Canada")
city_airports("London","CA")
city_airports("London","CAN")
city_airports("London","124")
```
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