

Package ‘UADIIndicator’

August 10, 2017

Type Package

Title UADI Population Mobility Indicators

Version 1.1.0

Depends R (>= 2.15.0), RCurl, jsonlite

Date 2017-07-10

Author Guohun Zhu

Maintainer Guohun Zhu <guohun.zhu.phd@ieee.org>

Description This R package is used to access Urban Analytics Data Infrastructure (UADI) indicators <http://uadi.project.uq.edu.au/>.

There are five indicators for UADI: Average Journey to work distance (by mode), Average Journey to work time (by mode), Average CO2 emissions (by car), Active Transport Indicator (by bicycle and/or walk).

License GPL

Encoding UTF-8

R topics documented:

getActiveTransportIndicator	1
getCO2Indicator	2
getCyclingIndicator	3
getDistTimeIndicator	4
getDistTimeIndicator	5
getDistTimeIndicator	6
getGraphIndicator	7
getWalkIndicator	8
Index	10

getActiveTransportIndicator

get Pysical Activity for Transport (walk and cycling) for UADI!

Description

This is the total of the journey from home to the work place by mode.

It also includes Average time of the journey from home to the work place by mode.

Usage

```
getActiveTransportIndicator(region, year, travel_mod, direction, sacodetype, key)
```

Arguments

region	input one of three Regions: Sydney, Melbourne, or SEQ, default SEQ
year	three census year: 2001, 2006 or 2011, default 2011
travel_mod	Bicycle, Walk, or All, default: All
direction	"O", "D" default: "O"
sacodetype	"SA2", "SA3" default: "SA3"
key	This is the key your assigned by UQ eResearch group, please contact UQ eResearch group to obtain your key

Value

Region	
Mod	
Year	
minValues	This contains the details of SA3 regions details. the minimum perons for Phycial activity.
maxValues	This contains the details of SA3 regions details. the maximum perons for Phycial activity.
features	This contains the details of SA3 regions details. It contans: SACode, name, latitude, longitude, distance. Total cycling persons, Total walk persons, total destination SA regions, total female and total males

See Also

[getCyclingIndicator](#) [getWalkIndicator](#) [getCO2Indicator](#)

Examples

```
getActiveTransportIndicator('SEQ', 2011)
```

getCO2Indicator	<i>get Green indicator for UADI!</i>
-----------------	--------------------------------------

Description

This is the statistical for CO2 emissions (in grams) for all commuter car trips for a given region. The output includes minimum and maximum CO2 emssions, the average CO2 emssions in each city.

Usage

```
getCO2Indicator(region, year, direction, sacodetype, key)
```

Arguments

region	input one of three Regions: Sydney, Melbourne, or SEQ, default SEQ
year	three census year: 2001, 2006 or 2011, default 2011
direction	"O", "D" default: "O"
sacodetype	"SA2", "SA3" default: "SA3"
key	This is the key your assigned by UQ eResearch group, please contact UQ eResearch group to obtain your key

Value

Region	
Mod	
Year	
minValues	This contains minimum distances indicators and CO2 emission for car driver mode in JTW.
maxValues	This contains maximum distances indicators and CO2 emission for car driver mode in JTW.
features	This contains the details of SA3 regions details. It contains: SACode, name, latitude, longitude, distance. Total CO2 Emission in one time JTW (g), Total greenhouse rating of a vehicle which was derived from the CO2 emissions of all vehicles, total level of air pollutant emissions allowable for all vehicles

See Also

[getCyclingIndicator](#) [getWalkIndicator](#) [getDistTimeIndicator](#)

Examples

```
getCO2Indicator('SEQ', 2011, 'Car')
```

getCyclingIndicator *get Cycling Indicator for UADI!*

Description

This is the statistical for JTW by cycling by give census years.

Usage

```
getCyclingIndicator(region, year, OD, sacodetype, key)
```

Arguments

region	input one of three Regions: Sydney, Melbourne, or SEQ, default SEQ
year	three census year: 2001, 2006 or 2011, default 2011
OD	"Original", or "Destination". default: Original
sacodetype	"SA2", "SA3" default: "SA3"
key	This is the key your assigned by UQ eResearch group, please contact UQ eResearch group to obtain your key

Value

Region	
Mod	
Year	
minValues	This contains the details of SA3 regions details. the minimum perons for Phycial activity.
maxValues	This contains the details of SA3 regions details. the maximum perons for Phycial activity.
features	This contains the details of SA3 regions details. It contans: SACode, name, latitude, longitude, distance. Total cycling persons, Total walk persons, total destination SA regions, total female and total males

See Also

[getActiveTransportIndicator](#) [getWalkIndicator](#) [getDistTimeIndicator](#)

Examples

```
getCyclingIndicator('SEQ', 2011)
```

getDistTimeIndicator *get Distance and Time Indicator for UADI!*

Description

This is the Average distance of the journey from home to the work place by mode.
It also inlcudes Average time of the journey from home to the work place by mode.

Usage

```
getDistTimeIndicator(region, year, travel_mod, key)
```

Arguments

region	input one of three Regions: Sydney, Melbourne, or SEQ, default SEQ
year	three census year: 2001, 2006 or 2011, default 2011
travel_mod	nine travel mode: "Train", "Bus", "Ferry", "CarDriver", "CarPassenger", "Bicycle", "Walk", "Taxi", "Truck", or "Motorbike". default: CarDriverr
key	This is the key your assigned by UQ eResearch group, please contact UQ eResearch group to obtian your key

Value

Region

Mod

Year

Mean linear distance(km)

Distance Indicator

Time Indicator

Mean travel time(M)

features This contains the details of SA3 regions details. It is a json file.

Examples

```
getDistTimeIndicator('SEQ', 2011, 'Car')
```

```
getDistTimeIndicator    get Distance and Time Indicator for UADI!
```

Description

This is the Average distance of the journey from home to the work place by mode.
It also includes Average time of the journey from home to the work place by mode.

Usage

```
getDistTimeIndicator(region, year, travel_mod, OD, sacodetype, key)
```

Arguments

region	input one of three Regions: Sydney, Melbourne, or SEQ, default SEQ
year	three census year: 2001, 2006 or 2011, default 2011
travel_mod	nine travel mode: "Train", "Bus", "Ferry", "CarDriver", "CarPassenger", "Bicycle", "Walk", "Taxi", "Truck", or "Motorbike". default: CarDriver
OD	"Original", or "Destination". default: Original
sacodetype	"SA2", "SA3" default: "SA3"
key	This is the key your assigned by UQ eResearch group, please contact UQ eResearch group to obtain your key

Value

Region

Mod

Year

Mean linear distance(km)

Distance Indicator

Time Indicator

Mean travel time(M)

features This contains the details of SA3 regions details. It is a json file.

See Also

[getActiveTransportIndicator](#) [getWalkIndicator](#) [getC02Indicator](#)

Examples

```
getDistTimeIndicator('SEQ', 2011, 'Car')
```

getDistTimeIndicator *get Distance and Time Indicator for UADI!*

Description

This is the Average distance of the journey from home to the work place by mode.
It also includes Average time of the journey from home to the work place by mode.

Usage

```
getDistTimeIndicator(region, year, travel_mod, direction, sacodetype, key)
```

Arguments

region	input one of three Regions: Sydney, Melbourne, or SEQ, default SEQ
year	three census year: 2001, 2006 or 2011, default 2011
travel_mod	nine travel mode: "Train", "Bus", "Ferry", "CarDriver", "CarPassenger", "Bicycle", "Walk", "Taxi", "Truck", or "Motorbike". default: CarDriver
direction	"O", "D" default: "O"
sacodetype	"SA2", "SA3" default: "SA3"
key	This is the key your assigned by UQ eResearch group, please contact UQ eResearch group to obtain your key

Value

Region
 Mod
 Year
 Mean linear distance(km)

 Distance Indicator

 Time Indicator
 Mean travel time(M)

features This contains the details of SA3 regions details. It is a json file.

Examples

```
getDistTimeIndicator('SEQ', 2011,'Car')
```

getGraphIndicator	<i>get Graph indicators for UADI!</i>
-------------------	---------------------------------------

Description

This is the Average distance of the journey from home to the work place by mode.
 It also includes Average time of the journey from home to the work place by mode.

Usage

```
getGraphIndicator(region, year,travel_mod,key)
```

Arguments

region	input one of three Regions: Sydney, Melbourne, or SEQ, default SEQ
year	three census year: 2001, 2006 or 2011, default 2011
travel_mod	nine travel mode: "Train", "Bus", "Ferry", "CarDriver","CarPassenger", "Bicycle", "Walk", "Taxi", "Truck", or "Motorbike". default: CarDriver
key	This is the key your assigned by UQ eResearch group, please contact UQ eResearch group to obtain your key

Value

Region
 Mod
 Year
 Mean linear distance(km)

Distance Indicator

Time Indicator
Mean travel time(M)

features This contains the details of SA3 regions details. It is a json file.

References

Guohun Zhu, Jonathan Corcoran, Paul Shyy, Salvatore Flavio Pilegg, Jane Hunter Analysing journey-to-work data using complex networks. Submitted.

See Also

getCyclingIndicator

Examples

```
getDistTimeIndicator('SEQ', 2011, 'Car')
```

getWalkIndicator	<i>get Walkonly JTW Indicator for UADI!</i>
------------------	---

Description

This is the statistical for JTW by walked only.

Usage

```
getWalkIndicator(region, year, OD, sacodetype, key)
```

Arguments

region	input one of three Regions: Sydney, Melbourne, or SEQ, default SEQ
year	three census year: 2001, 2006 or 2011, default 2011
OD	"O", or "D". default: "O"
sacodetype	"SA2", "SA3" default: "SA3"
key	This is the key your assigned by UQ eResearch group, please contact UQ eResearch group to obtain your key

Value

Region	
Mod	
Year	
minValues	This contains the details of SA3 regions details. the minimum perons for walk activity.

maxValues	This contains the details of SA3 regions details. the maximum perons for walk activity.
features	This contains the details of SA3 regions details. It contans: SACode, name, latitude, longitude, distance. Total cycling persons, Total walk persons, total destination SA regions, total female and total males

Examples

```
getWalkIndicator('SEQ', 2011)
```

Index

*Topic **journey-to-work; complex
networks; transport mode;
Australian cities**

getGraphIndicator, [7](#)

getActiveTransportIndicator, [1](#), [4](#), [6](#)

getCO2Indicator, [2](#), [2](#), [6](#)

getCyclingIndicator, [2](#), [3](#), [3](#)

getDistTimeIndicator, [3](#), [4](#), [4–6](#)

getGraphIndicator, [7](#)

getWalkIndicator, [2–4](#), [6](#), [8](#)