# Package 'valleybike'

January 8, 2021

**Title** ValleyBike.org Utility Functions

**Version** 0.0.1

**Description** Utility functions to work with the ValleyBike.org data.

**License** GPL-2 | GPL-3

**Encoding** UTF-8

**LazyData** true

**Imports** dplyr,
emojifont,
geosphere,
ggmap,
ggplot2,
kableExtra,
knitr,
lubridate,
magrittr,
rmarkdown,
stats,
tidyr,
utils,
valleybikeData,
viridis

**Remotes** github::Amherst-Statistics/valleybikeData

**Roxygen** list(markdown = TRUE)

**RoxygenNote** 7.1.0

**Depends** R (>= 2.10)

## R topics documented:

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get_distance                          *get_distance*

---

### Description

Get trip distance

### Usage

```
get_distance(route_id, unit = "meters")
```

### Arguments

| | |
|---|---|
| route_id | A trip's route ID (as a string). |
| unit | The measurement unit for the distance (one of: "meters", "kilometers", "feet", or "miles"). Defaults to "meters". |

### Details

Get the distance covered by a trip.

### Value

The approximate distance covered by the trip (in the measurement unit specified).

### Examples

```
## Not run:
get_distance("route_04_2019@01253ad9-cfb8-44a5-9218-bff8109e4880")

## End(Not run)
```

---

get_duration                          *get_duration*

---

### Description

Get trip duration

### Usage

```
get_duration(route_id, unit = "minutes")
```

### Arguments

| | |
|---|---|
| route_id | A trip's route ID (as a string). |
| unit | The measurement unit for the duration (one of: "seconds", "minutes", or "hours"). Defaults to "minutes". |

## Details

Get the duration of a trip.

## Value

The approximate duration of the trip (in the measurement unit specified).

## Examples

```
## Not run:
get_duration("route_04_2019@01253ad9-cfb8-44a5-9218-bff8109e4880")

## End(Not run)
```

---

get_summary_report       *get_summary_report*

---

## Description

Get summary report

## Usage

```
get_summary_report(city, filename, path = ".", overwrite = FALSE)
```

## Arguments

| | |
|---|---|
| city | The city for which to generate the summary report (as a string). Can be one of: "Amherst", "Springfield", "Easthampton", "Northampton", "Holyoke", or "South Hadley". |
| filename | The file name to use for the generated .pdf report. |
| path | The path where to save the generated report. |
| overwrite | Whether to overwrite any existing file with the same name at the specified path. TRUE will overwrite existing files, FALSE will leave existing files alone and issue an error. Defaults to FALSE. |

## Details

Generate a .pdf summary report for a city in which ValleyBike is active.

## Examples

```
## Not run:
get_summary_report(city = "Amherst", filename = "amherst-report.pdf")

## End(Not run)
```

---

get_trajectory_data     *get_trajectory_data*

---

### Description

Get trajectory data

### Usage

```
get_trajectory_data(route_id)
```

### Arguments

route_id        A trip's route ID (as a string).

### Details

Get the point-by-point trajectory data for a trip.

### Value

A data frame of trajectory data for the given route ID.

### Examples

```
## Not run:
get_trajectory_data("route_07_2018@44bde968-5454-4db2-a4b1-a32493186f82")

## End(Not run)
```

---

identify_trips          *identify_trips*

---

### Description

Identify trips

### Usage

```
identify_trips(date = NULL, start_station = NULL, end_station = NULL)
```

### Arguments

date            The date that the trip was undertaken (as a YYYY-MM-DD string).

start_station   The start station of the trip (as a string).

end_station     The end station of the trip (as a string).

## Details

Identify the route IDs of specific trips using information about the date they were undertaken, the start station, and/or the end station. One can provide only one or all of the arguments.

## Value

A vector of route IDs that match the specified search criteria.

## Examples

```
## Not run:
identify_trips(date = "2019-07-12", start_station = "Amherst Town Hall")

## End(Not run)
```

---

| plot_trip | *plot_trip* |
|-----------|-------------|

---

## Description

Plot trip

## Usage

```
plot_trip(route_id, api_key, layers, ...)
```

## Arguments

| | |
|---|---|
| route_id | A trip's route ID (as a string). |
| api_key | A Google Maps API key to pass to ggmap::register_google (required). |
| layers | Any additional ggplot2 layers to add to the plot, such as titles, themes, etc. |
| ... | Arguments to pass to ggmap::get_map for customizing the map background, such as zoom, maptype, source, color, etc. |

## Details

Plot the trajectory of a trip on the map.

## Value

A ggplot2 plot object of the trip's trajectory on the map.

## Examples

```
## Not run:
plot_trip("route_04_2019@01253ad9-cfb8-44a5-9218-bff8109e4880", zoom = 16,
          layers = ggplot2::ggtitle("Trajectory of 01253ad9-cfb8-44a5-9218-bff8109e4880"))

## End(Not run)
```

---

weekend_or_holiday                    *weekend_or_holiday*

---

### Description

Weekend or holiday

### Usage

```
weekend_or_holiday(route_id)
```

### Arguments

route_id          A trip's route ID (as a string).

### Details

Determines whether a trip was undertaken on a weekend or on a federal holiday.

### Value

TRUE if the trip was undertaken on a weekend or federal holiday, FALSE otherwise.

### Examples

```
## Not run:
weekend_or_holiday("route_04_2019@01253ad9-cfb8-44a5-9218-bff8109e4880")

## End(Not run)
```

---

weekend_or_holiday_trips
                    *weekend_or_holiday_trips*

---

### Description

Number of weekend or holiday trips

### Usage

```
weekend_or_holiday_trips(user_id)
```

### Arguments

user_id           A user's ID (as a string).

### Details

Determines the number of trips by a specific user that were undertaken on a weekend or on a federal holiday.

## Value

TRUE if the trip was undertaken on a weekend or federal holiday, FALSE otherwise.

## Examples

```
## Not run:
weekend_or_holiday_trips("1cc1e858-857a-4f80-96e8-974f0e920620")

## End(Not run)
```

# Index