rnet

Release 0.2.0

Kota Sakazaki

May 08, 2022

CONTENTS:

CHAPTER

ONE

DATA

1.1 Maps

1.1.1 The MapData Class

class rnet.**MapData**(*vertices*, *links*, ***, *crs*, *name*)

Bases: `rnet.data.classes.bases.Data`

Class for representing map data.

Parameters

- **vertices** (`pandas.DataFrame`) – Frame containing vertex data.
- **links** (`pandas.DataFrame`) – Frame containing link data.
- **crs** (`int`) – EPSG code of the CRS in which vertex coordinates are represented.

classmethod from_osm(*path_to_osm*, ***kwargs*)

Instantiate class from an OSM file.

Parameters **path_to_osm** (`str`) – Path to OSM file.

Keyword Arguments

- **include** (`List[str]`, optional) – List of tags to include.
- **exclude** (`List[str]`, optional) – List of tags to exclude.
- **name** (`str`, optional) – Data source name. If unspecified, then the OSM file name is used.

Note: If required, either the *include* or *exclude* keyword should be given, not both. In the case that both are given, *include* takes precedence and *exclude* is ignored.

---

out(***kwargs*)

Exports vertex and link data frames.

Keyword Arguments

- **include** (`List[str]`, optional) – List of tags to include.
- **exclude** (`List[str]`, optional) – List of tags to exclude.
- **crs** (`int`, optional) – EPSG code of CRS for vertex coordinates. If different from `.crs`, then vertex coordinates are transformed to the specified *crs*.

Returns 2-tuple containing `.vertices` and `.links` frames with links filtered and vertices transformed.

Return type Tuple[pandas.DataFrame, pandas.DataFrame]

Note: If required, either the *include* or *exclude* keyword should be given, not both. In the case that both are given, *include* takes precedence and *exclude* is ignored.

1.1.2 The MapDataContainer Class

class rnet.**MapDataContainer**(*name=None*)

Bases: `rnet.data.classes.bases.DataContainer`

Container for map data.

add(*source*, *crs=None*)

Adds map data to the container.

Parameters

- **source** (`str` or `MapData`) – Either (1) path to OSM file, (2) path to directory containing `vertices.csv` and `links.csv` pair, or (3) `MapData` instance.
- **crs** (`int`, optional) – EPSG code of the CRS in which vertex coordinates are represented. Required only if *source* is of type (2).

out(**, assume_unique=False, **kwargs*)

Exports concatenated vertex and link data frames.

Keyword Arguments **assume_unique** (`bool`, optional) – If True, vertices and links in all data sources are assumed to be unique. If False, data sources are checked for uniqueness and only unique features are retained. Default: False.

Parameters ****kwargs** – Parameters passed to `MapData.out()`.

Returns 2-tuple containing `.vertices` and `.links` frames with links filtered and vertices transformed.

Return type Tuple[pandas.DataFrame, pandas.DataFrame]

Note: If required, either the *include* or *exclude* keyword should be given, not both. In the case that both are given, *include* takes precedence and *exclude* is ignored.

See also:

`MapData.out()`