

# Package ‘PostcodesioR’

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**Type** Package

**Title** API wrapper around Postcodes.io (a free Postcode lookup API and geocoder for the UK)

**Version** 0.1.1

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**Description** Free UK geocoding using data from Office for National Statistics.  
It is using several functions to get information about post codes, outward codes, reverse geocoding, nearest post codes/outward codes, validation, or randomly generate a post code.

**License** GPL-3 + file LICENSE

**URL** <https://github.com/erzk/PostcodesioR>

**LazyData** TRUE

**Depends** R (>= 3.1),  
httr

**RoxygenNote** 6.0.1

**Suggests** knitr,  
rmarkdown,  
testthat,  
covr

**VignetteBuilder** knitr

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bulk_postcode_lookup	<i>Bulk postcode lookup</i>
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## Description

Returns a list of matching postcodes and respective available data.

## Usage

```
bulk_postcode_lookup(postcodes)
```

## Arguments

postcodes      Accepts a list of postcodes. Accepts up to 100 postcodes.

## Value

A list.

## Examples

```
pc_list <- list(postcodes = c("PR3 0SG", "M45 6GN", "EX165BL"))
bulk_postcode_lookup(pc_list)
```

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bulk_reverse_geocoding	<i>Reverse geocoding</i>
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## Description

Returns nearest postcodes for a given longitude and latitude. Accepts up to 100 geolocations.

## Usage

```
bulk_reverse_geocoding(geolocations)
```

## Arguments

geolocations      A list containing an array of geolocation objects.

**Details**

This method requires a JSON object containing an array of geolocation objects to be POSTed. Each geolocation object accepts an optional radius (meters) and limit argument. Both default to 100m and 10 respectively. It also accepts a wideSearch argument.

**Value**

A list with the geocoded data.

**Examples**

```
geolocations_list <- structure(
  list(
    geolocations = structure(
      list(
        longitude = c(-3.15807731271522, -1.12935802905177),
        latitude = c(51.4799900627036, 50.7186356978817),
        limit = c(NA, 100L),
        radius = c(NA, 500L)),
      .Names = c("longitude", "latitude", "limit", "radius"),
      class = "data.frame",
      row.names = 1:2)),
  .Names = "geolocations")

bulk_reverse_geocoding(geolocations_list)
```

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nearest_outcode	<i>Nearest outcode</i>
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**Description**

Returns nearest outcodes for a given outcode.

**Usage**

```
nearest_outcode(outcode, limit = NULL, radius = NULL)
```

**Arguments**

outcode	A string with a UK postcode.
limit	An integer. Optional parameter. Limits number of postcodes matches to return. Defaults to 10. Needs to be less than 100.
radius	An integer. Optional parameter. Limits number of postcodes matches to return. Defaults to 5,000m. Needs to be less than 25,000m.

**Value**

A list of geographical properties.

**Examples**

```
nearest_outcode("EC1Y")
```

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nearest_postcode	<i>Nearest postcode</i>
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**Description**

Returns nearest postcodes for a given postcode.

**Usage**

```
nearest_postcode(postcode)
```

**Arguments**

postcode	A string.
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**Details**

Optional Query Parameters

limit= (not required) Limits number of postcodes matches to return. Defaults to 10. Needs to be less than 100.

radius= (not required) Limits number of postcodes matches to return. Defaults to 100m. Needs to be less than 2,000m.

**Value**

A list of geographic properties of the nearest postcode.

**Examples**

```
nearest_postcode("EC1Y 8LX")
```

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outcode_reverse_geocoding	<i>Outcode reverse geocoding</i>
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**Description**

Returns nearest outcodes for a given longitude and latitude.

**Usage**

```
outcode_reverse_geocoding(longitude, latitude)
```

**Arguments**

longitude	A string, integer or float. Needs to have at least two decimal points.
latitude	A string, integer or float. Needs to have at least two decimal points.

**Details**

## Optional Query Parameters

limit= (not required) Limits number of postcodes matches to return. Defaults to 10. Needs to be less than 100.

radius= (not required) Limits number of postcodes matches to return. Defaults to 5,000m. Needs to be less than 25,000m.

**Value**

A list of geographical properties.

**Examples**

```
outcode_reverse_geocoding("-3.15", "51.47")
outcode_reverse_geocoding(-3.15, 51.47)
outcode_reverse_geocoding("-3.15807731271522", "51.4799900627036")
```

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outward_code_lookup	<i>Outward code lookup</i>
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**Description**

Geolocation data for the centroid of the outward code specified.

**Usage**

```
outward_code_lookup(outcode)
```

**Arguments**

outcode	A string. The outward code representing the first half of any postcode (separated by a space).
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**Value**

The list of geographical properties.

**Examples**

```
outward_code_lookup("E1")
```

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place_lookup	<i>Place Lookup</i>
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**Description**

Lookup a place by code. Returns all available data if found. Returns 404 if place does not exist.

**Usage**

```
place_lookup(code)
```

**Arguments**

code	A string. The unique identifier for places - Ordnance Survey (OSGB) code.
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**Value**

A list with available places.

**Examples**

```
place_lookup("osgb4000000074544700")
```

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place_query	<i>Place Query</i>
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**Description**

Submit a place query and receive a complete list of places matches and associated data.

**Usage**

```
place_query(place, limit = 10)
```

**Arguments**

place	A string. Name of a place to search for.
limit.	An integer. Limits the number of matches to return. Defaults to 10. Needs to be less than 100.

**Value**

A list with available places.

**Examples**

```
place_query("Hills")
place_query("Hills", limit = 12)
```

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postcode\_autocomplete    *Postcode autocomplete*

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### Description

Convenience method to return an list of matching postcodes.

### Usage

```
postcode_autocomplete(postcode, limit = 10)
```

### Arguments

postcode	A string. Valid UK postcode.
limit	An integer. Limits number of postcodes matches to return. Defaults to 10. Needs to be less than 100.

### Value

A list of suggested postcodes.

### Examples

```
postcode_autocomplete("E1")
postcode_autocomplete("E1", limit = 11)
```

---

postcode\_lookup    *Postcode lookup*

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### Description

Lookup a postcode.

### Usage

```
postcode_lookup(postcode)
```

### Arguments

postcode	A string. Valid UK postcode.
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### Value

A list. Returns all available data if found. Returns 404 if postcode does not exist.

### Examples

```
postcode_lookup("EC1Y8LX")
postcode_lookup("EC1Y 8LX")
```

---

postcode_query	<i>Postcode query</i>
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**Description**

Submit a postcode query and receive a complete list of postcode matches and all associated postcode data.

**Usage**

```
postcode_query(postcode, limit = 10)
```

**Arguments**

postcode	A string. Valid UK postcode.
limit	An integer. Limits the number of matches to return. Defaults to 10. Needs to be less than 100.

**Details**

Optional Query Parameters

query= (not required) aliases to q=

limit= (not required) Limits number of postcodes matches to return. Defaults to 10. Needs to be less than 100.

**Value**

A list of geographic properties.

**Examples**

```
postcode_query("EC1Y8LX")  
postcode_query("EC1", limit = 11)
```

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postcode_validation	<i>Postcode validation</i>
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**Description**

Convenience method to validate a postcode.

**Usage**

```
postcode_validation(postcode)
```

**Arguments**

postcode	A string. Valid UK postcode.
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**Value**

A logical vector: True or False (meaning respectively valid or invalid postcode).

**Examples**

```
postcode_validation("EC1Y 8LX") # returns TRUE
postcode_validation("XYZ") # returns FALSE
```

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random_place	<i>Random Place</i>
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**Description**

Returns a random place and all associated data

**Usage**

```
random_place()
```

**Value**

A data frame describing a random place and all associated data.

**Examples**

```
random_place()
```

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random_postcode	<i>Random postcode</i>
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**Description**

Returns a random postcode and all available data for that postcode.

**Usage**

```
random_postcode(outcode = NULL)
```

**Arguments**

outcode	A string. Filters random postcodes by outcode. Returns null if invalid outcode. Optional.
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**Value**

A data frame with a random post code with corresponding characteristics.

## Examples

```
random_postcode()
random_postcode("N1")
```

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reverse_geocoding	<i>Reverse geocoding</i>
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## Description

Returns nearest postcodes for a given longitude and latitude.

## Usage

```
reverse_geocoding(longitude, latitude, limit = 10, radius = 100,
  wideSearch = NULL)
```

## Arguments

longitude	A string. Needs to have at least three decimal points.
latitude	A string. Needs to have at least three decimal points.
limit	An integer. Limits number of postcodes matches to return. Defaults to 10. Needs to be less than 100.
radius	An integer. Limits number of postcodes matches to return. Defaults to 100m. Needs to be less than 2,000m.
wideSearch	TRUE or FALSE. Search up to 20km radius, but subject to a maximum of 10 results. Since lookups over a wide area can be very expensive, we've created this method to allow you choose to make the trade off between search radius and number of results. Defaults to false. When enabled, radius and limits over 10 are ignored.

## Value

A list with available data.

## Examples

```
reverse_geocoding(0.127, 51.507)
reverse_geocoding("0.1275", "51.5073", limit = 3)
reverse_geocoding("0.1275", "51.5073", limit = 11, radius = 200)
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