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# geopy 1.20.0

```
pip install geopy
```



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Last released: May 26, 2019

Python Geocoding Toolbox

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## Project description

pypi **v1.20.0** build **passing** license **MIT**

geopy is a Python 2 and 3 client for several popular geocoding web services.

geopy makes it easy for Python developers to locate the coordinates of addresses, cities, countries, and landmarks across the globe using third-party geocoders and other data sources.

geopy includes geocoder classes for the [OpenStreetMap Nominatim](#), [Google Geocoding API \(V3\)](#), and many other geocoding services. The full list is available on the [Geocoders doc section](#). Geocoder classes are located in [geopy.geocoders](#).

geopy is tested against CPython (versions 2.7, 3.4, 3.5, 3.6, 3.7), PyPy, and PyPy3. geopy does not and will not support CPython 2.6.

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## Installation

Install using [pip](#) with:

```
pip install geopy
```

Or, [download a wheel or source archive from PyPI](#).

## Geocoding

To geolocate a query to an address and coordinates:

```
>>> from geopy.geocoders import Nominatim
>>> geolocator = Nominatim(user_agent="specify_your_app_name_here")
>>> location = geolocator.geocode("175 5th Avenue NYC")
>>> print(location.address)
Flatiron Building, 175, 5th Avenue, Flatiron, New York, NYC, New York, ...
>>> print((location.latitude, location.longitude))
(40.7410861, -73.9896297241625)
>>> print(location.raw)
{'place_id': '9167009604', 'type': 'attraction', ...}
```

To find the address corresponding to a set of coordinates:

```
>>> from geopy.geocoders import Nominatim
>>> geolocator = Nominatim(user_agent="specify_your_app_name_here")
>>> location = geolocator.reverse("52.509669, 13.376294")
>>> print(location.address)
Potsdamer Platz, Mitte, Berlin, 10117, Deutschland, European Union
>>> print((location.latitude, location.longitude))
(52.5094982, 13.3765983)
>>> print(location.raw)
{'place_id': '654513', 'osm_type': 'node', ...}
```

## Measuring Distance

Geopy can calculate geodesic distance between two points using the [geodesic distance](#) or the [great-circle distance](#), with a default of the geodesic distance available as the function `geopy.distance.distance`.

Here's an example usage of the geodesic distance:

```
>>> from geopy.distance import geodesic
>>> newport_ri = (41.49008, -71.312796)
>>> cleveland_oh = (41.499498, -81.695391)
>>> print(geodesic(newport_ri, cleveland_oh).miles)
538.390445368
```

Using great-circle distance:

```
>>> from geopy.distance import great_circle
>>> newport_ri = (41.49008, -71.312796)
>>> cleveland_oh = (41.499498, -81.695391)
>>> print(great_circle(newport_ri, cleveland_oh).miles)
536.997990696
```

## Documentation

More documentation and examples can be found at [Read the Docs](#).



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