0:13
Hello everyone, I welcome you all to this  tutorial on Geocoding API; extracting information
0:20
from Geocoding API using Nominatim. So, what  exactly we are going to do in this exercise is-
0:26
we can type any particular address as a text, and  in return we can get so many details about that
0:32
address like latitude longitude type of place  and the actual correct address, for example,
0:38
in Google Maps you can type some approximate  address but it all it still picks it up and
0:43
gives you the actual address right. So, we can do all those things using
0:47
this particular API which can be accessed  through a library called Geopy dot Geocoders
0:56
right. So, what exactly we are going to do is  we are going to use this particular library
1:00
called geopy geocoders, and inside this module,  we have a function called Nominatim. So, this is a
1:11
module that is facilitated by  the OpenStreetMap, right.
1:15
So, the open-source is analogous to a Google Maps  open source version of something like a Google
1:23
Maps, right. So, this library you have to install  if you are trying in your local system, but if you
1:29
are using Google Colab, this is actually available  to you by default, but I am just showing you. So,
1:37
it already exists, right. So, I need not install  if I am running this using a Colab notebook.
1:45
So, now let us import this particular  Nominatim from geopy dot geocoders and I am

1:53
using the mygeocoder agent  of this nominator. It is a,
1:58
it is just a syntax and then here locator  dot geocode you can type any address
2:04
that you want the information for. So, I am just  typing, let us say something like an Effiel Tower,

2:12
right. So, now once I get the geocodes for this  particular text that I have typed, I can ask for
2:19
many information. Let us say in this, I am  asking for the latitude and longitude.

2:24
So, this is the syntax location has. So, it is  basically a dictionary, it is a JSON, and you
2:30
can ask for many parameters of this particular  location, right; latitude, longitude, things
2:35
like that. So, if I just type print everything  that it got, you can see what information it has-
2:41
its bounding box is basically the coordinates the  lat range longitudinal range and every text or
2:49
place is put into a class in OpenStreetMap. So, this is like a tourism location and class,
2:57
and then this is the actual correct address  right, you did not type this big address,
3:02
including zip code, but it is still figured out  and gives you the actual address. And of course,
3:08
you have an image as well and then some other  information OpenStreetMap license and the internal
3:16
id reference id and things like that. So, you  have nice thing called type of place, right.
3:22
So, in tourism there could be different  types like a museum and so on. So, this is

3:27
an attraction type. So, this is also something  that you can extract right. So, now let us,
3:35
let us try something else. So, let us say I am  typing just IIT Madras just like that one, and
3:41
I expect to know the lat long the actual address  of IIT madras but just by using the name and I
3:47
want to know what kind of place is it right. So, I am just Geocoding it, and then if I print
3:54
all the information I want, I can see that  is the complete address right IIT

Madras. So,
4:00
and. So, Tamil Nadu, India zip code 600036  and then it has some image. It has. So,

4:09
it says it belongs to an amenity class a  kind of like a useful building, and in type,
4:15
it is a university. So, IIT Madras is a at the  end of the day, it is a university, right.
4:19
So, you get the actual address and type of  place images, and this information could
4:26
be really useful, and you can do it using  this particular module called Nominatim. So,
4:30
that is it. Thank you for listening, and I hope  you learned something from this. Bye.