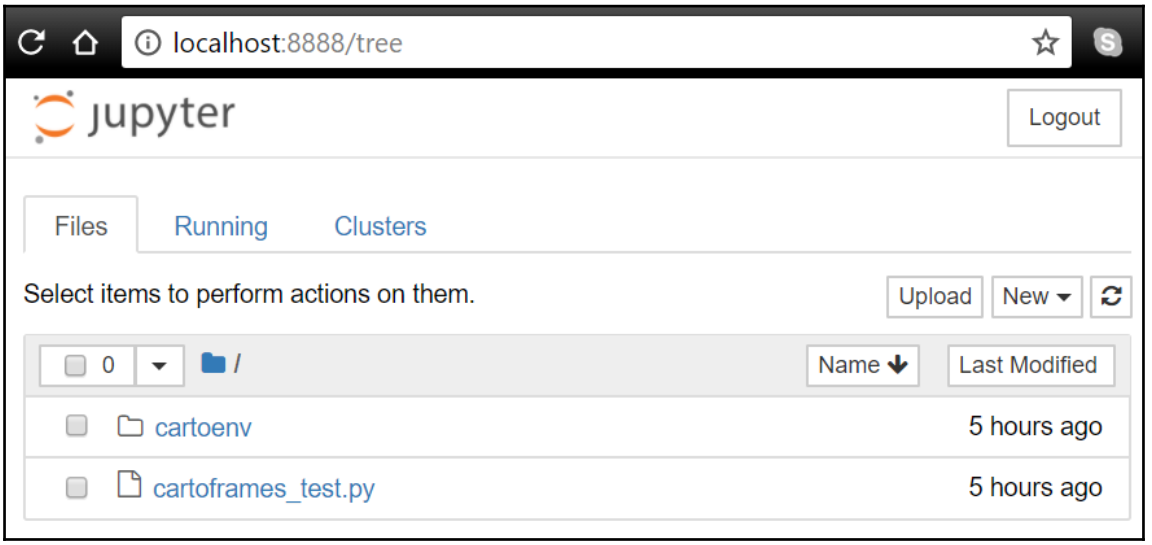
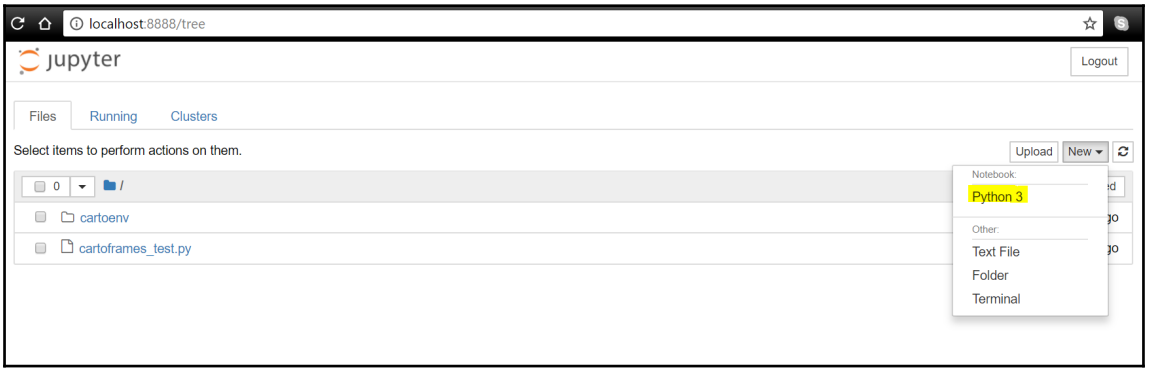
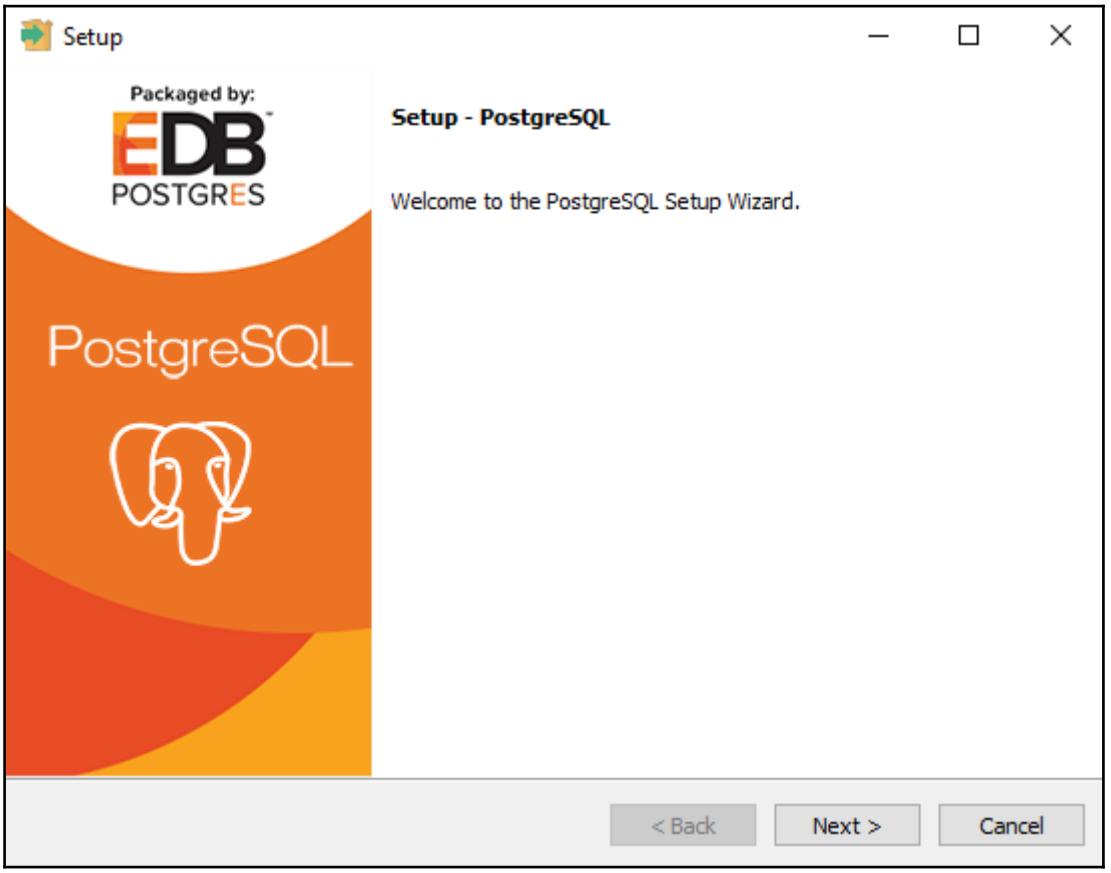
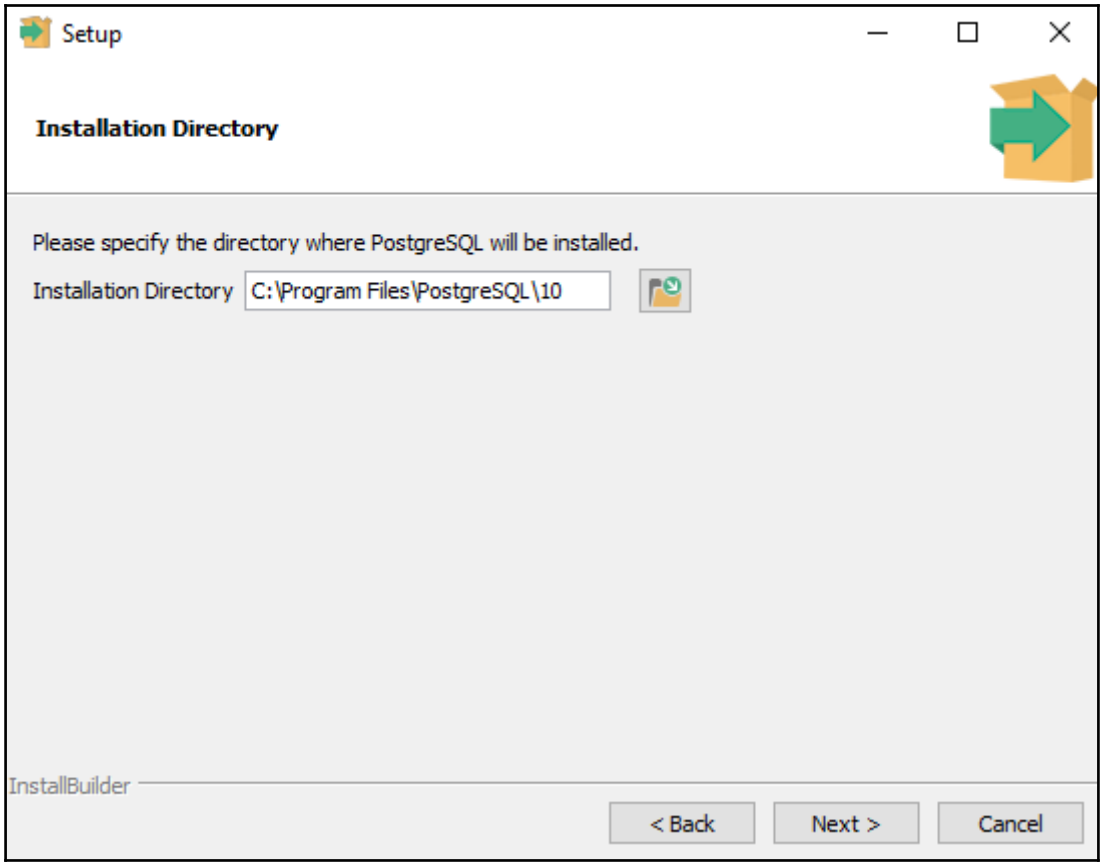
Chapter 1: Package Installation and Management

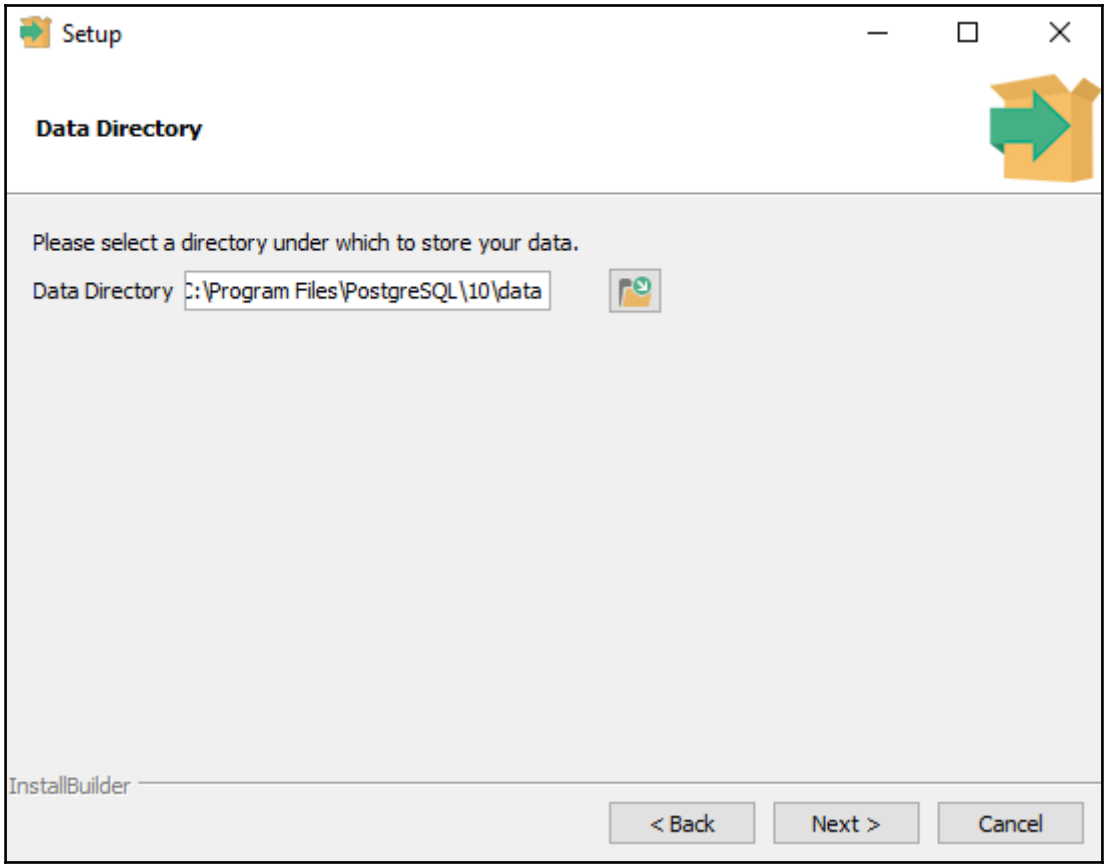


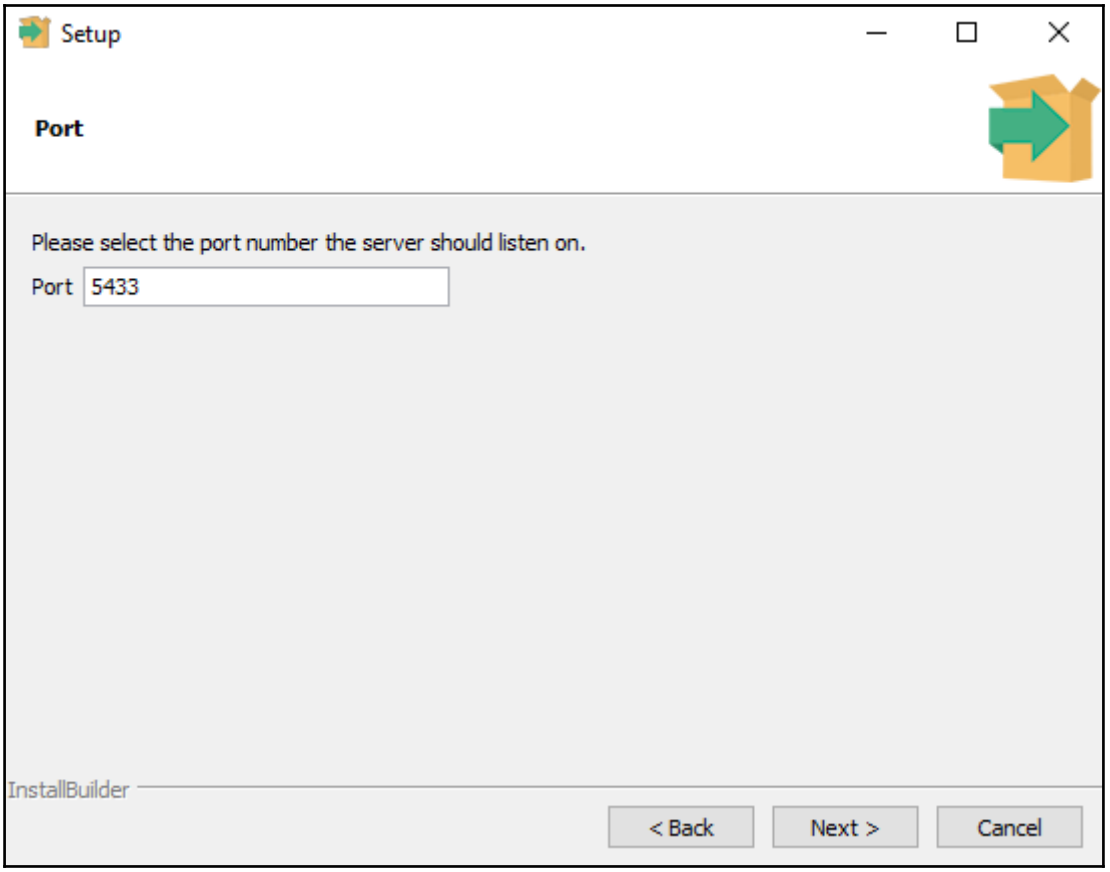


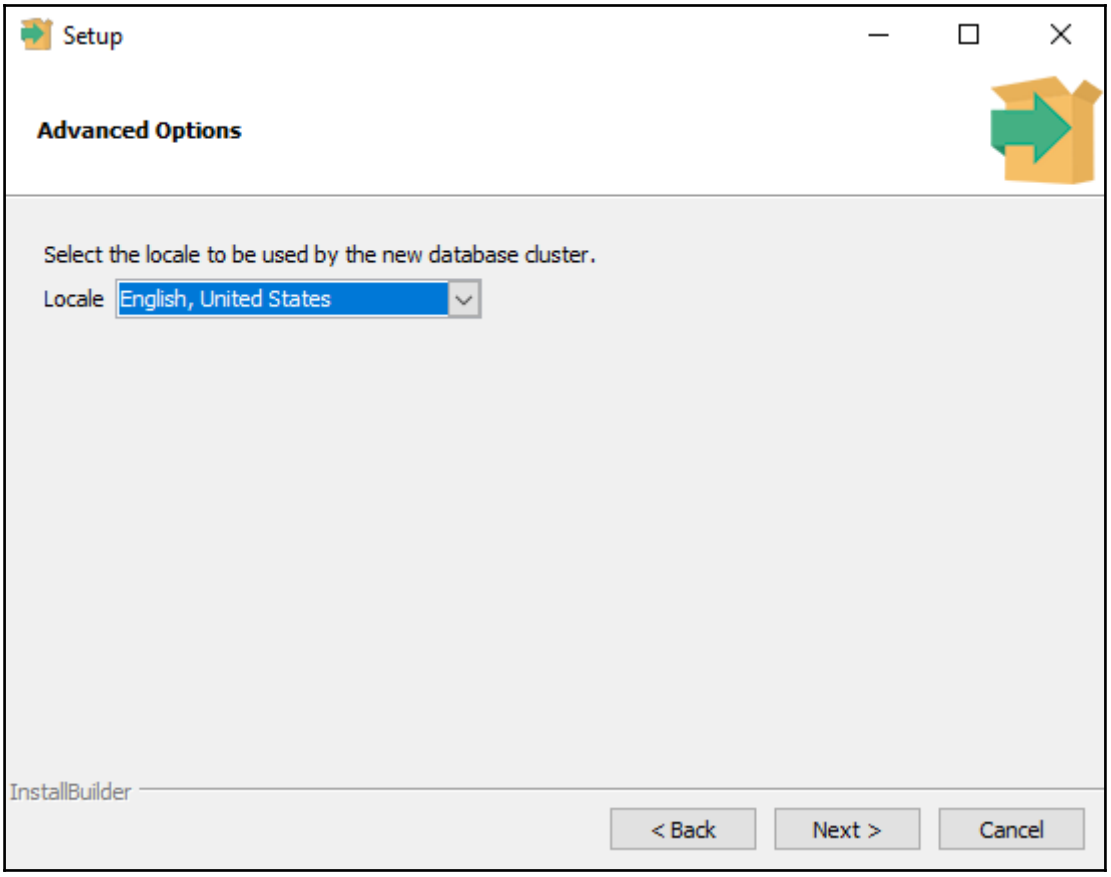
Chapter 3: Introduction to Geospatial Databases



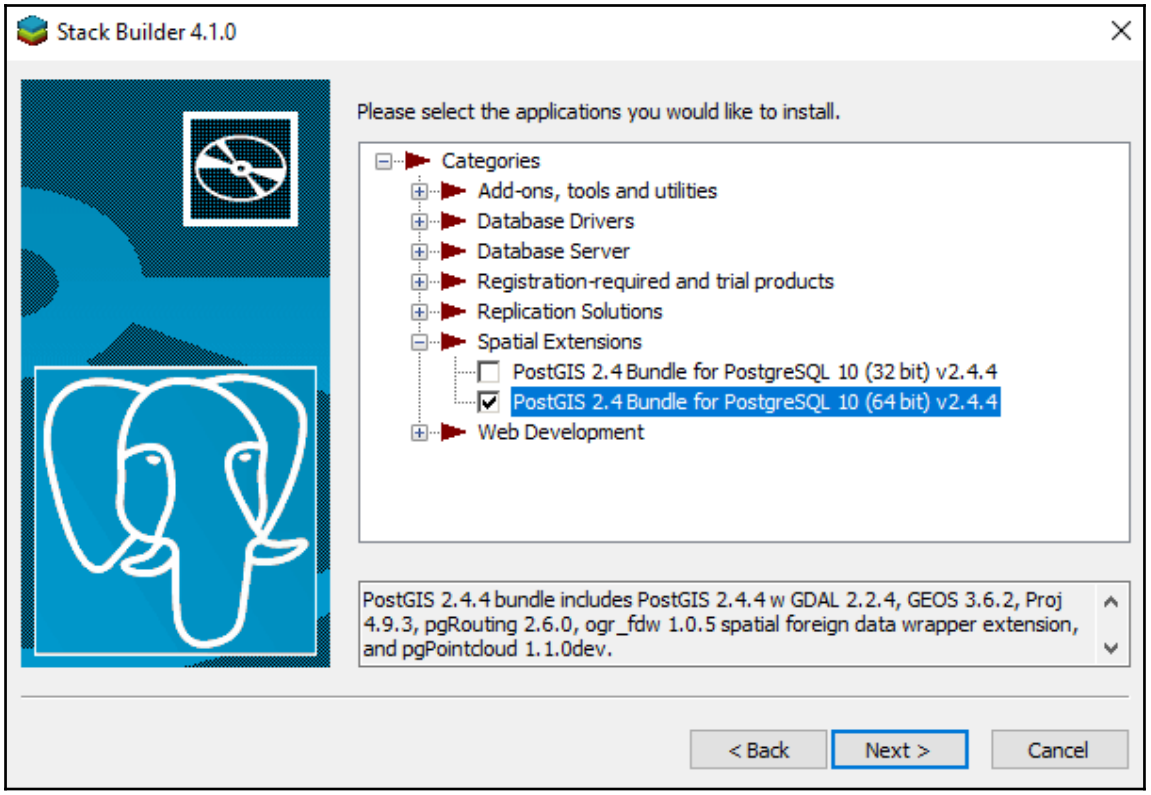

Setup
Installation Directory
Please specify the directory where PostgreSQL will be installed.
Installation Directory
C:\Program Files\PostgreSQL\10
InstallBuilder
< Back
Next >
Cancel

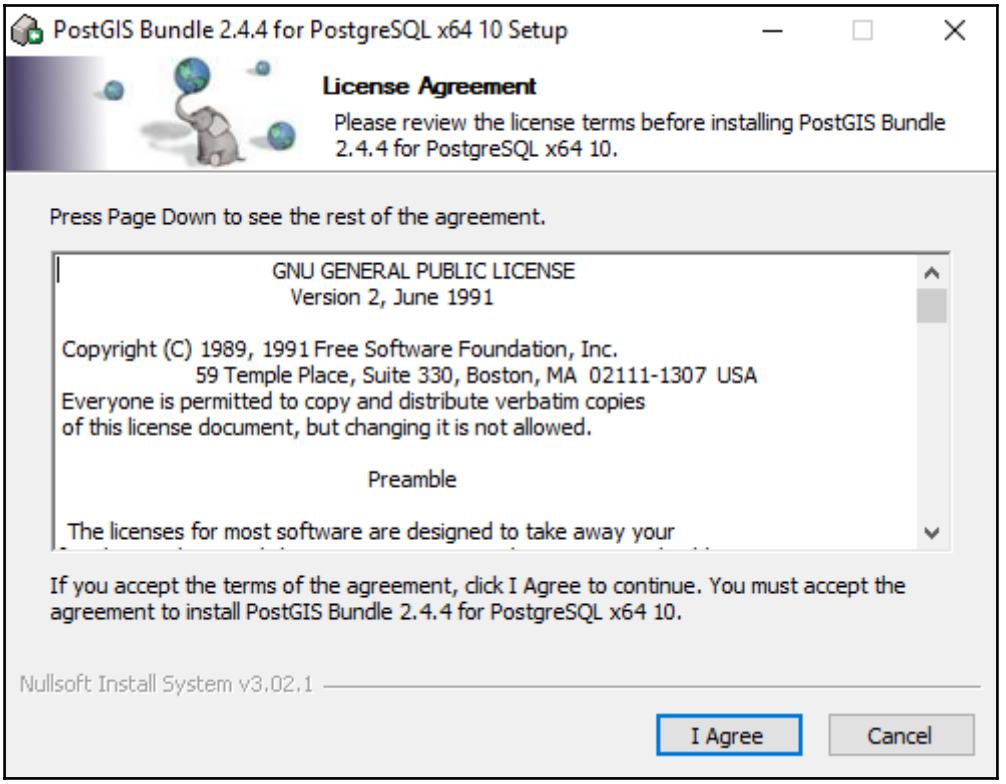

Setup
Data Directory
Please select a directory under which to store your data.
Data Directory
C:\Program Files\PostgreSQL\10\data
InstallBuilder
< Back
Next >
Cancel

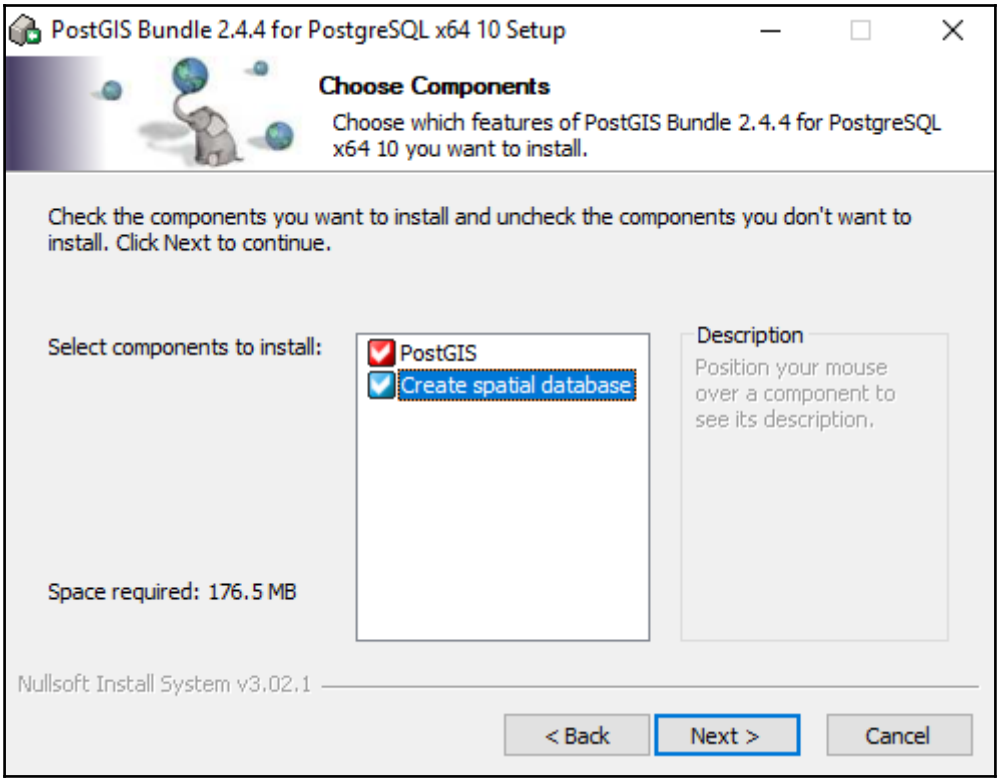

Setup
Port
Please select the port number the server should listen on.
Port
5433
InstallBuilder
< Back
Next >
Cancel

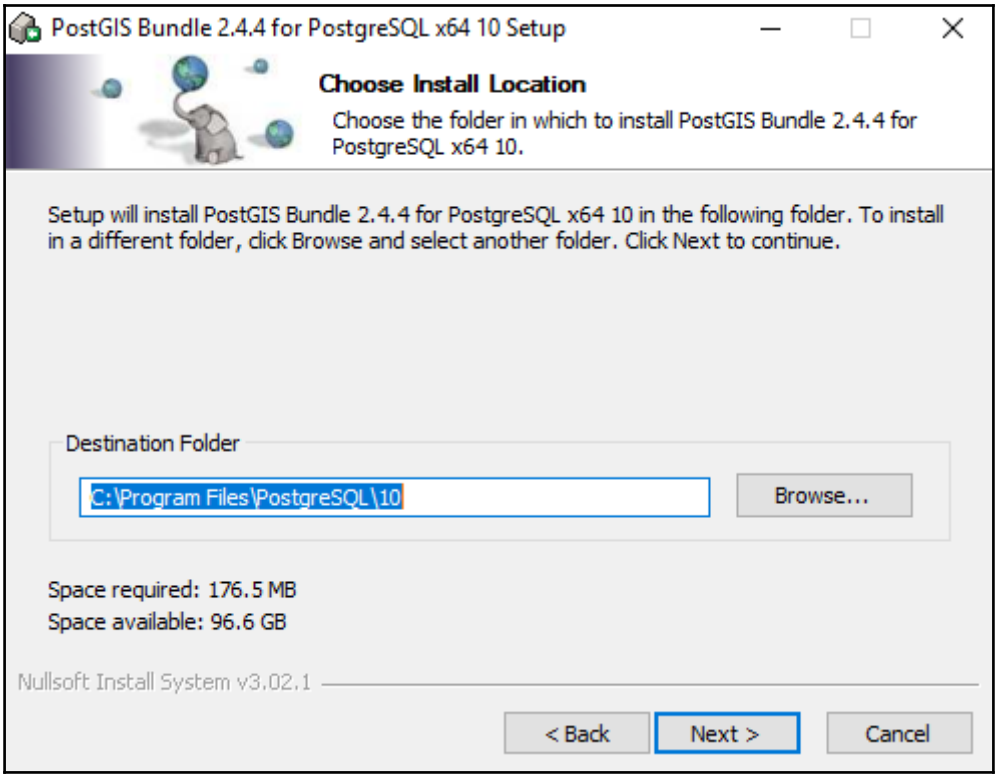

Setup
Advanced Options
Select the locale to be used by the new database cluster.
Locale
English, United States
InstallBuilder
< Back
Next >
Cancel

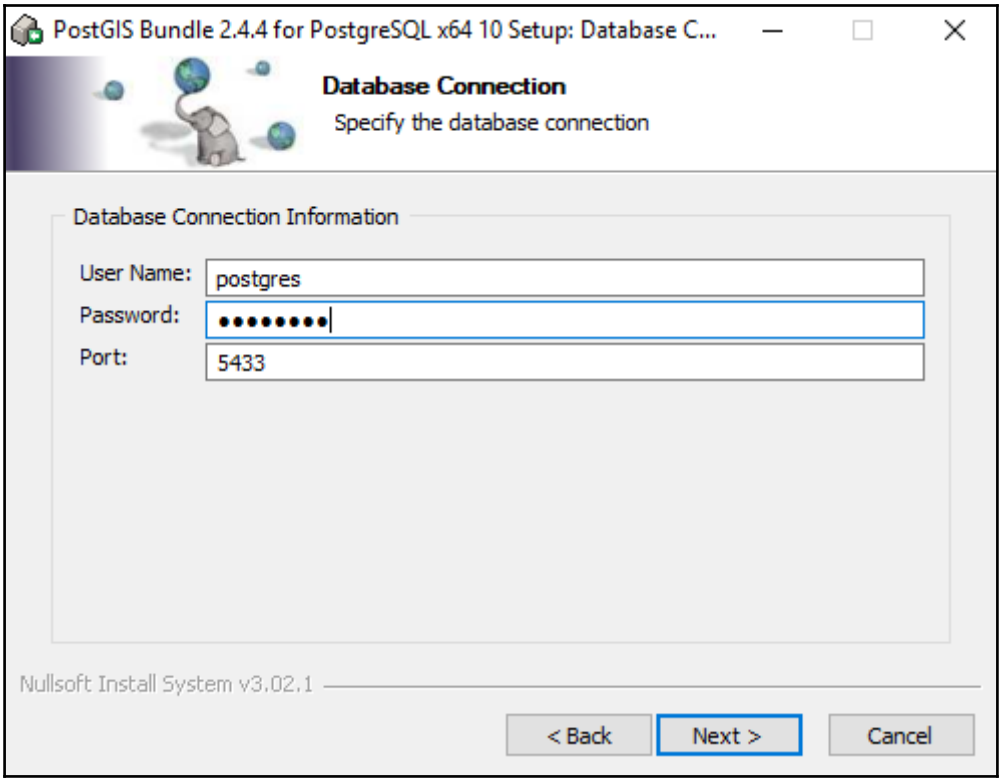

Setup
Packaged by:
EDB
POSTGRES
PostgreSQL
Completing the PostgreSQL Setup Wizard
Setup has finished installing PostgreSQL on your computer.
Launch Stack Builder at exit?
Stack Builder may be used to download and install additional tools, drivers and applications to complement your PostgreSQL installation.
< Back
Finish
Cancel

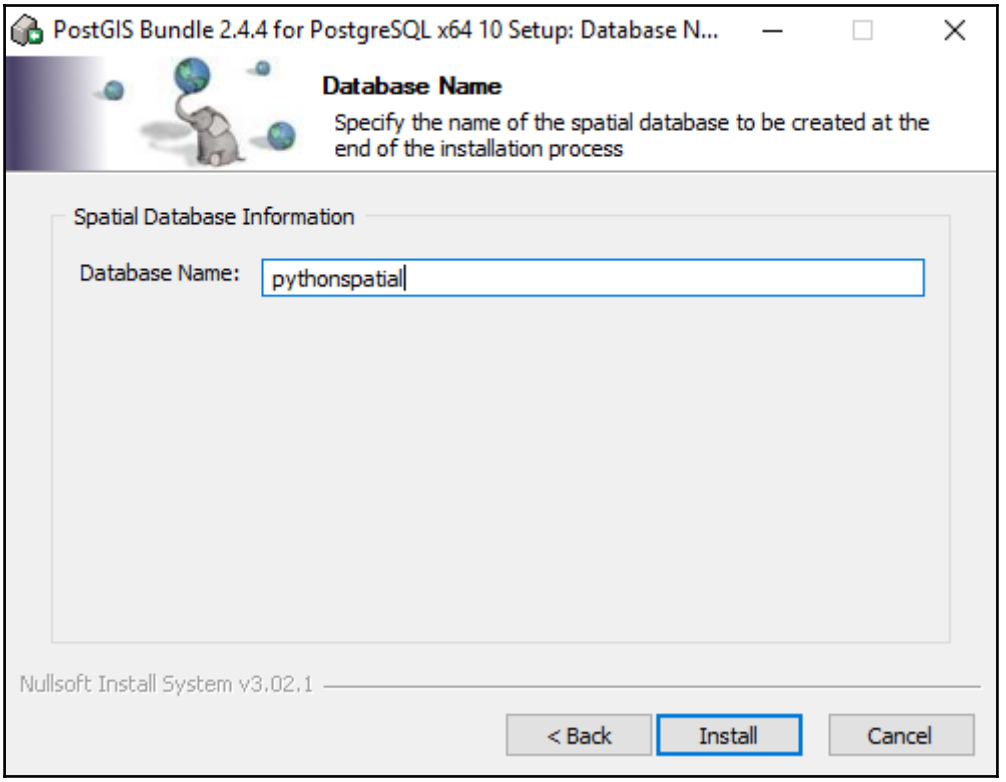

Stack Builder 4.1.0
Please select the applications you would like to install.
Categories
Add-ons, tools and utilities
Database Drivers
Database Server
Registration-required and trial products
Replication Solutions
Spatial Extensions
PostGIS 2.4 Bundle for PostgreSQL 10 (32 bit) v2.4.4
PostGIS 2.4 Bundle for PostgreSQL 10 (64 bit) v2.4.4
Web Development
PostGIS 2.4.4 bundle includes PostGIS 2.4.4 w GDAL 2.2.4, GEOS 3.6.2, Proj 4.9.3, pgRouting 2.6.0, ogr_fdw 1.0.5 spatial foreign data wrapper extension, and pgPointcloud 1.1.0dev.
< Back
Next >
Cancel

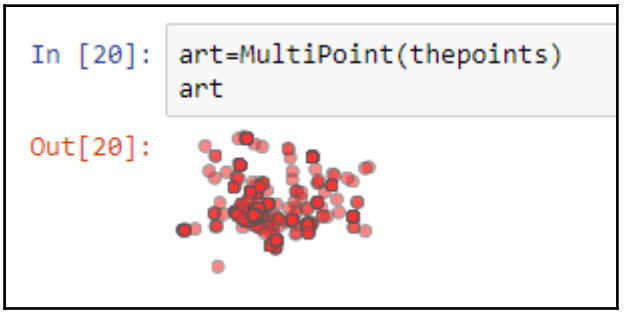

PostGIS Bundle 2.4.4 for PostgreSQL x64 10 Setup
License Agreement
Please review the license terms before installing PostGIS Bundle 2.4.4 for PostgreSQL x64 10.
Press Page Down to see the rest of the agreement.
GNU GENERAL PUBLIC LICENSE
Version 2, June 1991
Copyright (C) 1989, 1991 Free Software Foundation, Inc.
59 Temple Place, Suite 330, Boston, MA 02111-1307 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.
Preamble
The licenses for most software are designed to take away your
If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install PostGIS Bundle 2.4.4 for PostgreSQL x64 10.
Nullsoft Install System v3.02.1
I Agree
Cancel

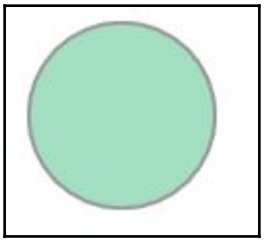

PostGIS Bundle 2.4.4 for PostgreSQL x64 10 Setup
Choose Components
Choose which features of PostGIS Bundle 2.4.4 for PostgreSQL x64 10 you want to install.
Check the components you want to install and uncheck the components you don't want to install. Click Next to continue.
Select components to install:
PostGIS
Create spatial database
Description
Position your mouse over a component to see its description.
Space required: 176.5 MB
Nullsoft Install System v3.02.1
< Back
Next >
Cancel

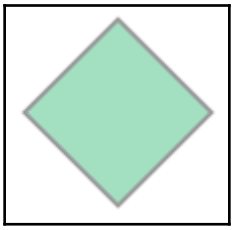

PostGIS Bundle 2.4.4 for PostgreSQL x64 10 Setup
Choose Install Location
Choose the folder in which to install PostGIS Bundle 2.4.4 for PostgreSQL x64 10.
Setup will install PostGIS Bundle 2.4.4 for PostgreSQL x64 10 in the following folder. To install in a different folder, click Browse and select another folder. Click Next to continue.
Destination Folder
C:\Program Files\PostgreSQL\10
Browse...
Space required: 176.5 MB
Space available: 96.6 GB
Nullsoft Install System v3.02.1
< Back
Next >
Cancel

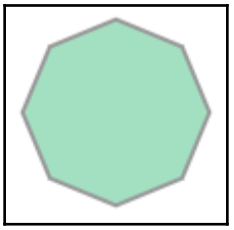

PostGIS Bundle 2.4.4 for PostgreSQL x64 10 Setup: Database C...
Database Connection
Specify the database connection
Database Connection Information
User Name:
postgres
Password:
Port:
5433
Nullsoft Install System v3.02.1
< Back
Next >
Cancel


PostGIS Bundle 2.4.4 for PostgreSQL x64 10 Setup: Database N...
Database Name
Specify the name of the spatial database to be created at the end of the installation process
Spatial Database Information
Database Name:
pythonspatial
Nullsoft Install System v3.02.1
< Back
Install
Cancel


In [20]:
art=MultiPoint(thepoints)
art
Out[20]:



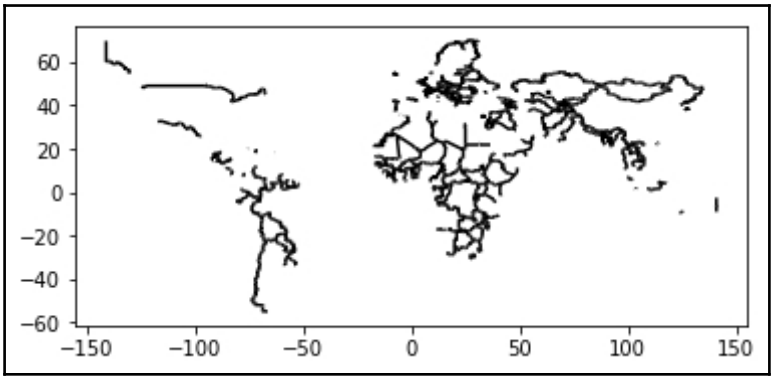


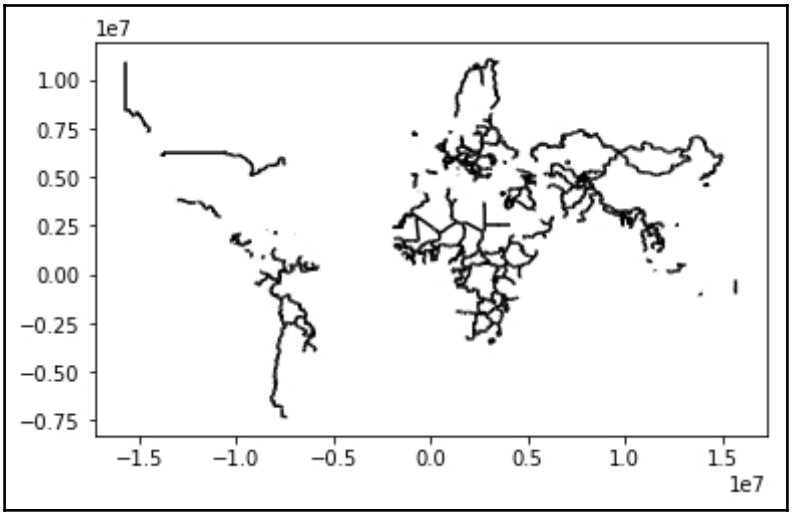


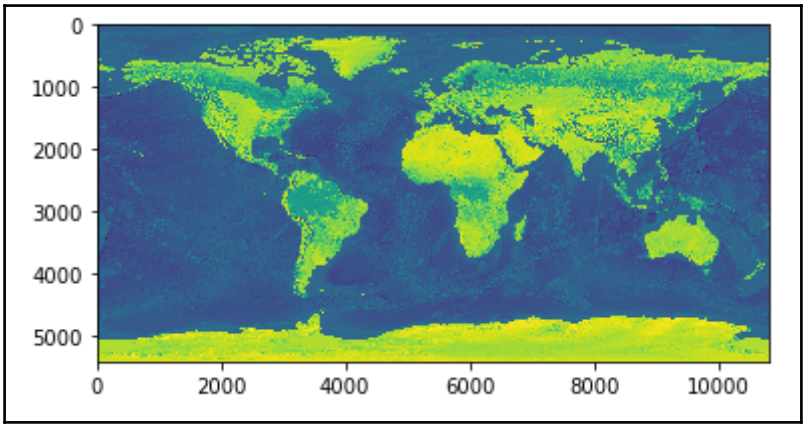
Chapter 4: Data Types, Storage, and Conversion

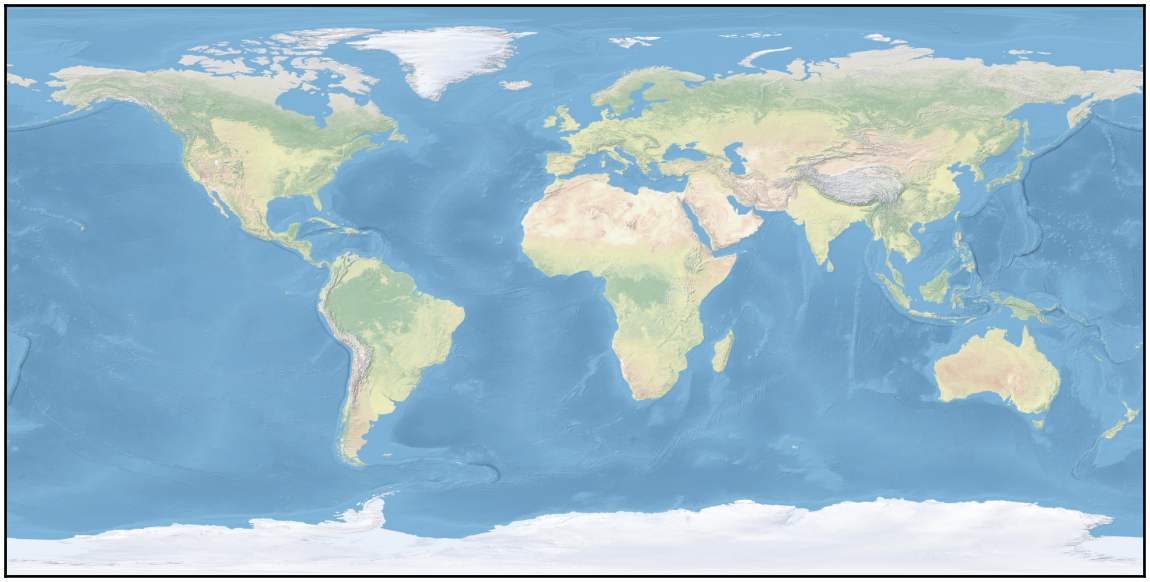
Out[1]:

	featurecla	name	comment	adm0_usa	adm0_left	adm0_right	adm0_a3_l	adm0_a3_r	sov_a3_l	sov_a3_r	type	labelrank	scalerank	min_zoom	mir
0	Indefinite (please verify)	None	None	1	Canada	United States of America	CAN	USA	Wat	US1	Water Indicator	2	1	2.0	
1	International boundary (verify)	None	None	1	Sweden	Norway	SWE	NOR	SWE	NOR	Water Indicator	2	1	0.0	
2	International boundary (verify)	None	None	1	Denmark	Germany	DNK	DEU	DN1	DEU	Water Indicator	5	1	0.0	
3	International boundary (verify)	None	None	1	Singapore	Malaysia	SGP	MYS	SGP	MYS	Water Indicator	3	1	0.0	
4	International boundary (verify)	None	None	1	Uruguay	Argentina	URY	ARG	URY	ARG	Water Indicator	2	1	0.0	




1e7
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.5
−1.0
−0.5
0.0
0.5
1.0
1.5
1e7


0
1000
2000
3000
4000
5000
0
2000
4000
6000
8000
10000



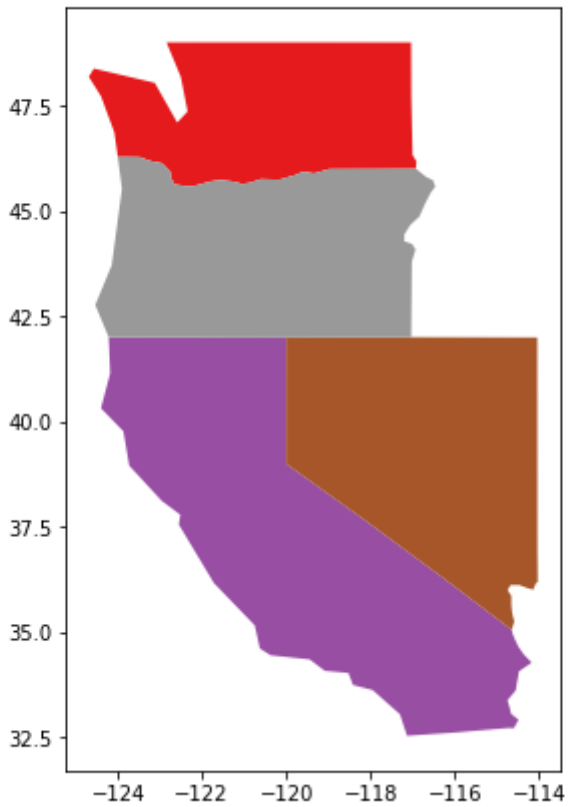
Chapter 5: Vector Data Analysis

```
In [31]: geom = shape(minnesota)
         geom
```

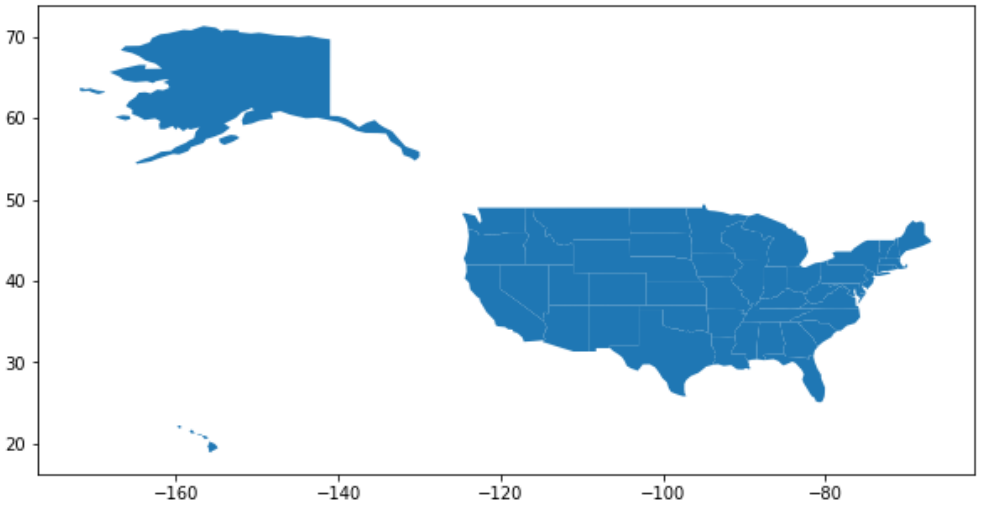
Out[31]:

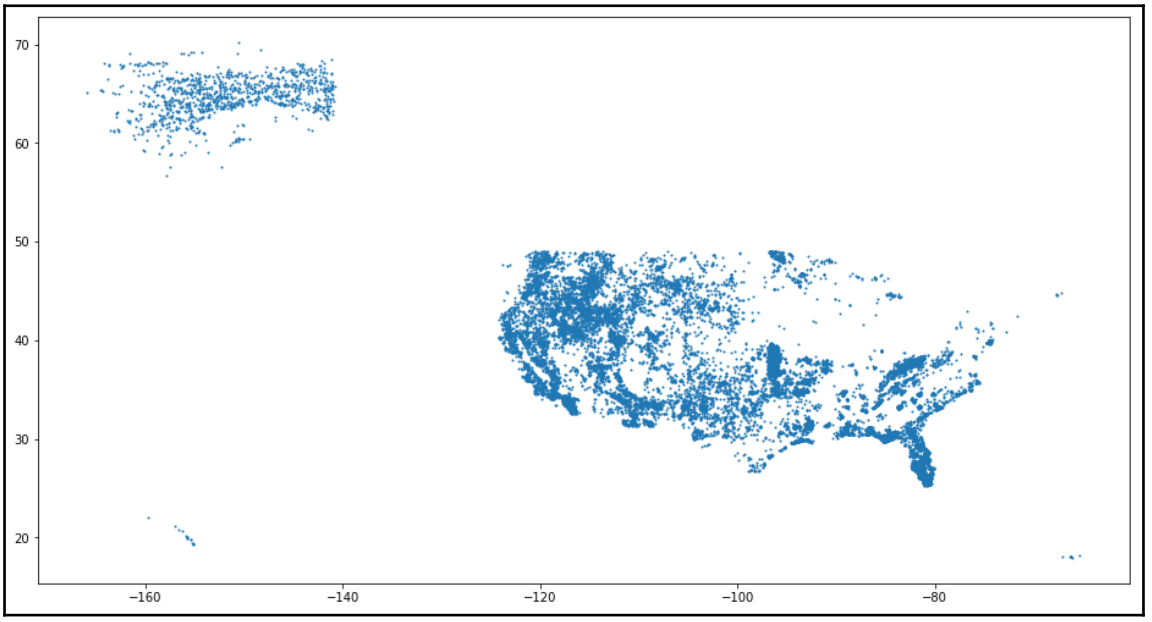
```
Out[22]: <matplotlib.axes._subplots.AxesSubplot at 0x2c5b92ff9e8>
```

```
Out[56]: <matplotlib.axes._subplots.AxesSubplot at 0x2c5b95d48d0>
```



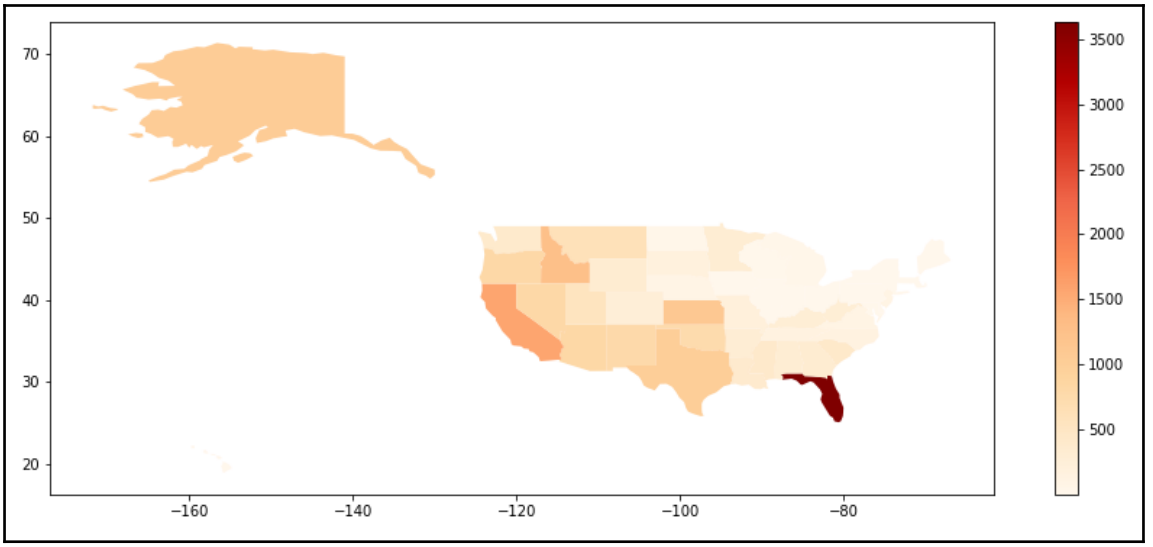
```
Out[15]: <matplotlib.axes._subplots.AxesSubplot at 0x234eb127e48>
```

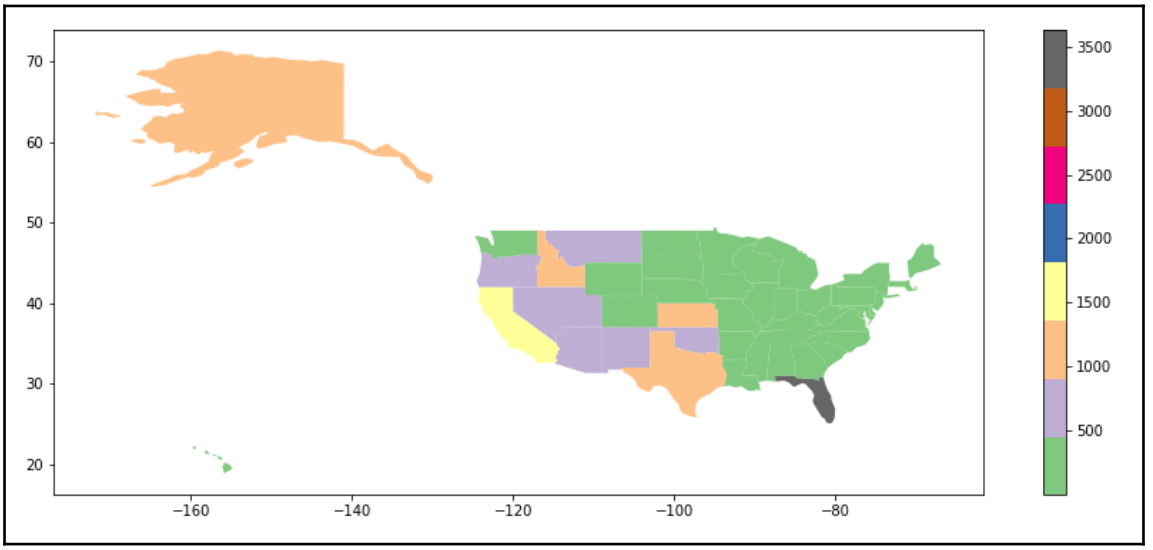


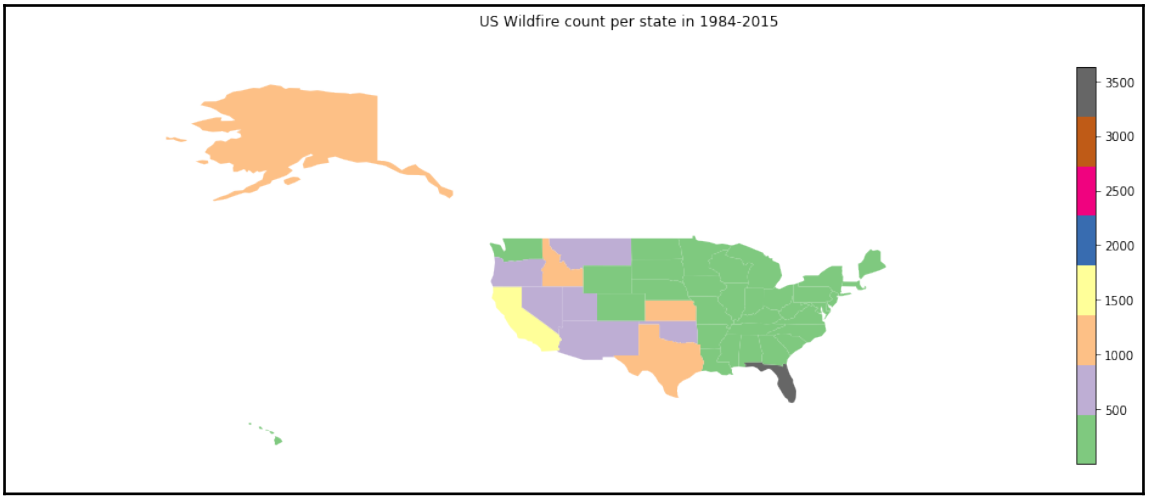


Fire_Type	geometry	index_right	name
WF	POINT (-141.851 65.29600000000001)	50	Alaska
WF	POINT (-162.314 67.75700000000001)	50	Alaska
WF	POINT (-141.217 65.05)	50	Alaska
WF	POINT (-146.817 62.698)	50	Alaska
WF	POINT (-156.362 64.077)	50	Alaska
WF	POINT (-143.9 64.137)	50	Alaska
WF	POINT (-144.441 64.545)	50	Alaska

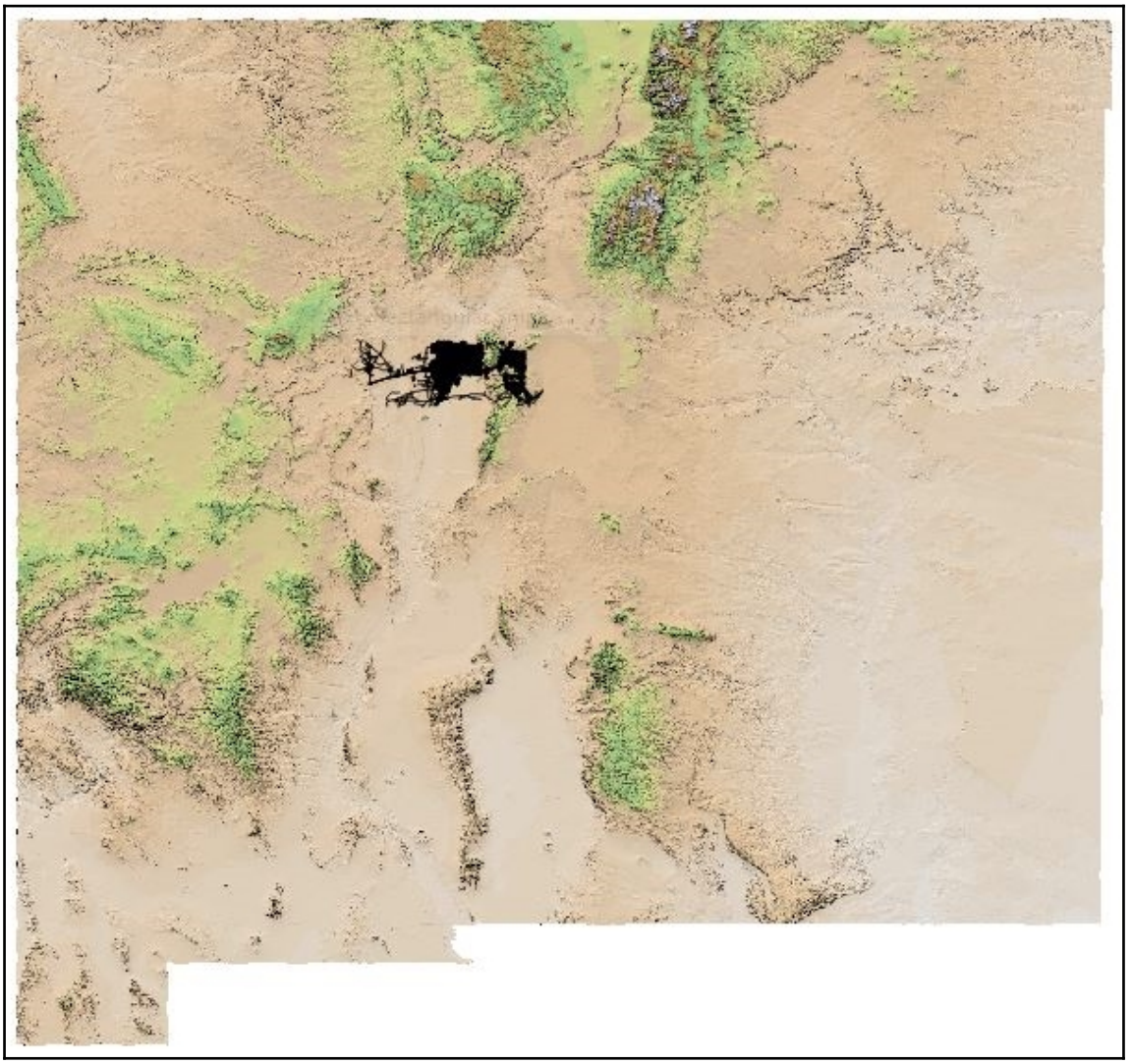
```
Out[54]: name
         Florida       3635
         California    1577
         Idaho         1278
         Kansas        1124
         Alaska        1062
         Texas         1011
         Arizona        836
```

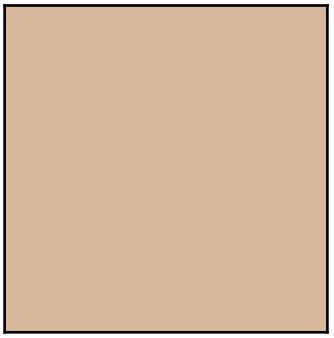

70
60
50
40
30
20
−160
−140
−120
−100
−80
3500
3000
2500
2000
1500
1000
500

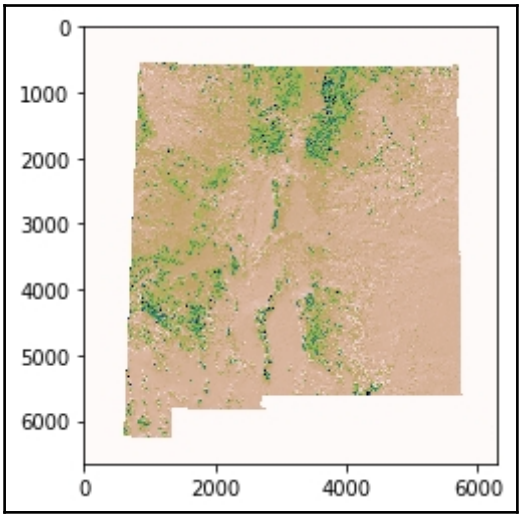

70
60
50
40
30
20
−160
−140
−120
−100
−80
3500
3000
2500
2000
1500
1000
500


US Wildfire count per state in 1984-2015
3500
3000
2500
2000
1500
1000
500

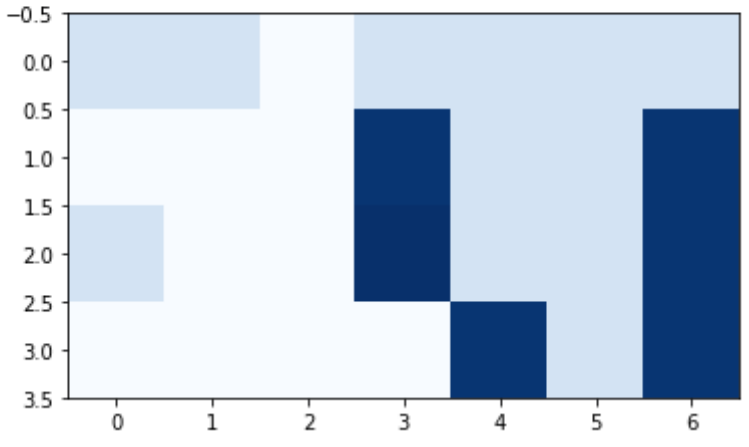
Chapter 6: Raster Data Processing

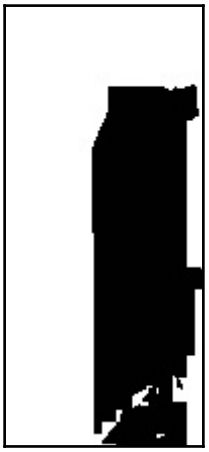




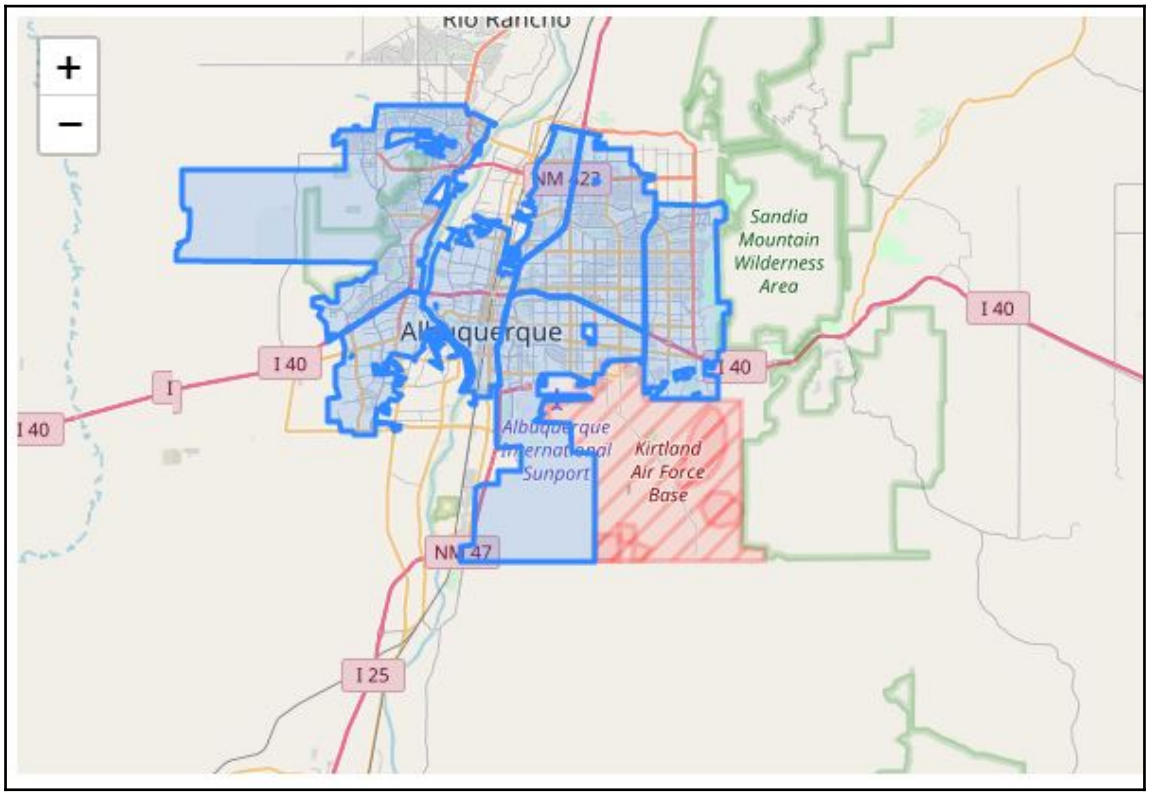

0
1000
2000
3000
4000
5000
6000
0
2000
4000
6000

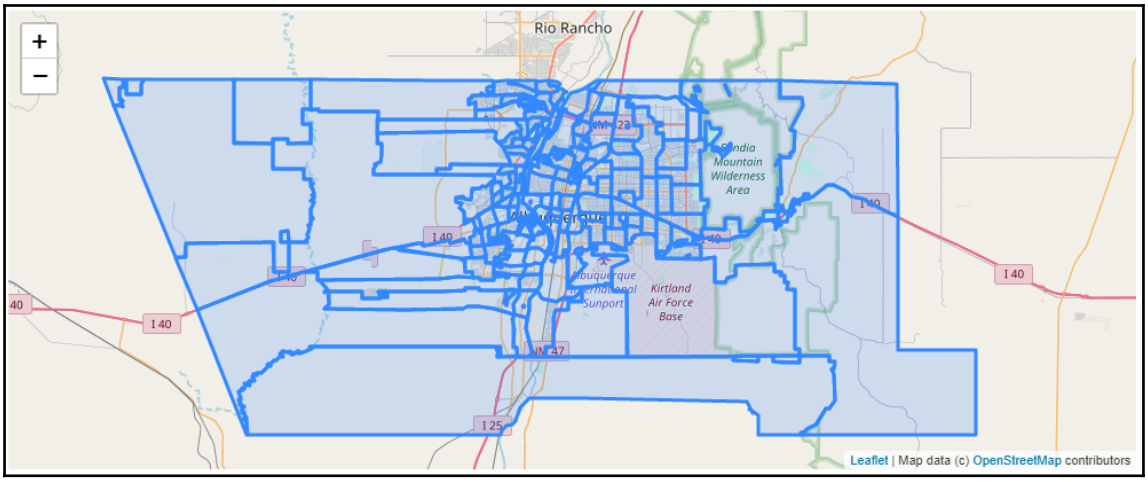
```
Out[6]: array([[10, 10,  1, 10, 10, 10, 10],
               [ 1,  1,  1, 50, 10, 10, 50],
               [10,  1,  1, 51, 10, 10, 50],
               [ 1,  1,  1,  1, 50, 10, 50]], dtype=uint16)
```

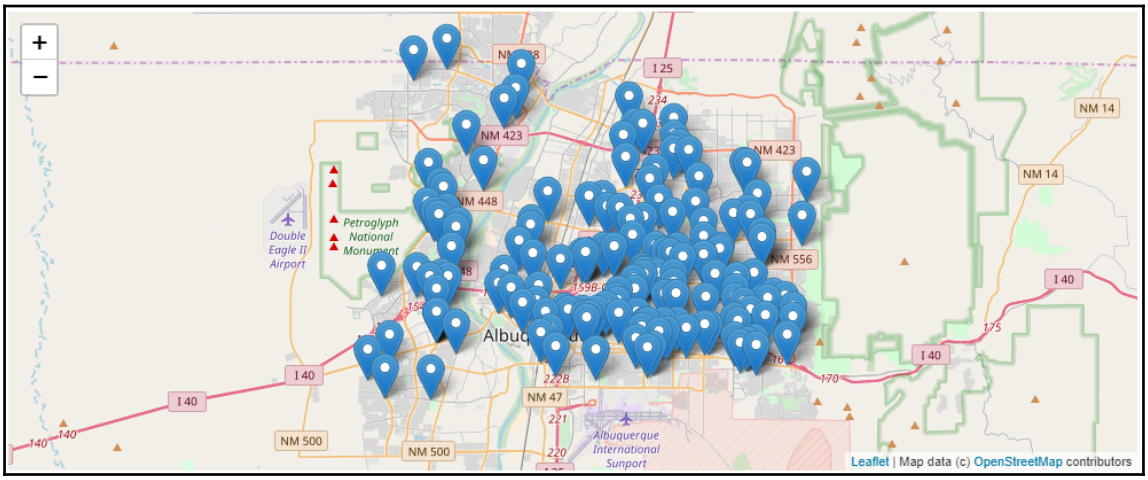


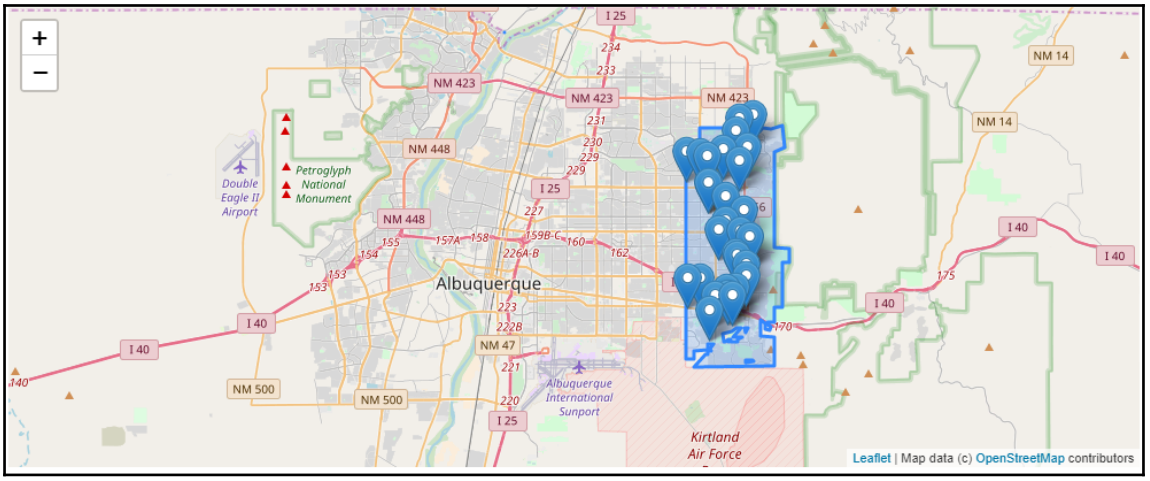


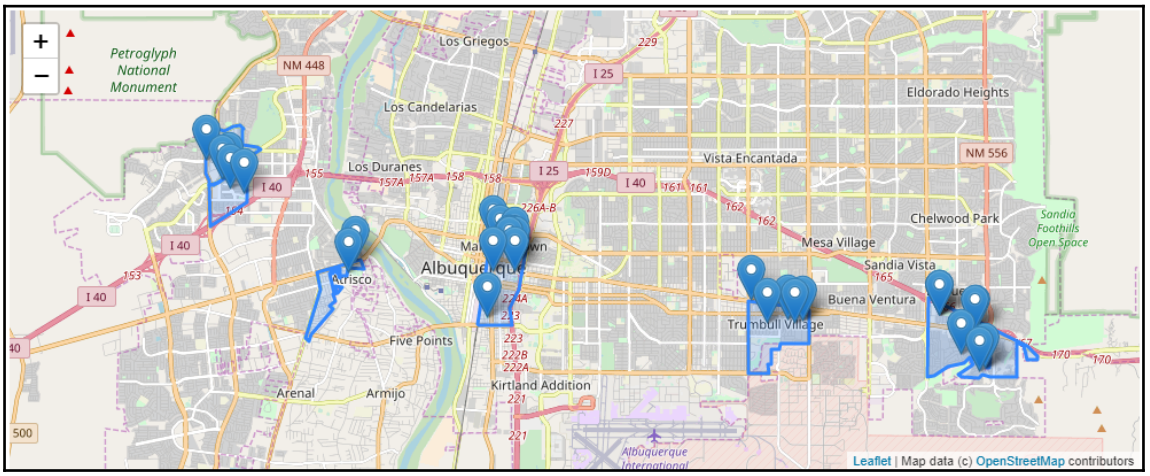
Chapter 7: Geoprocessing with Geodatabases

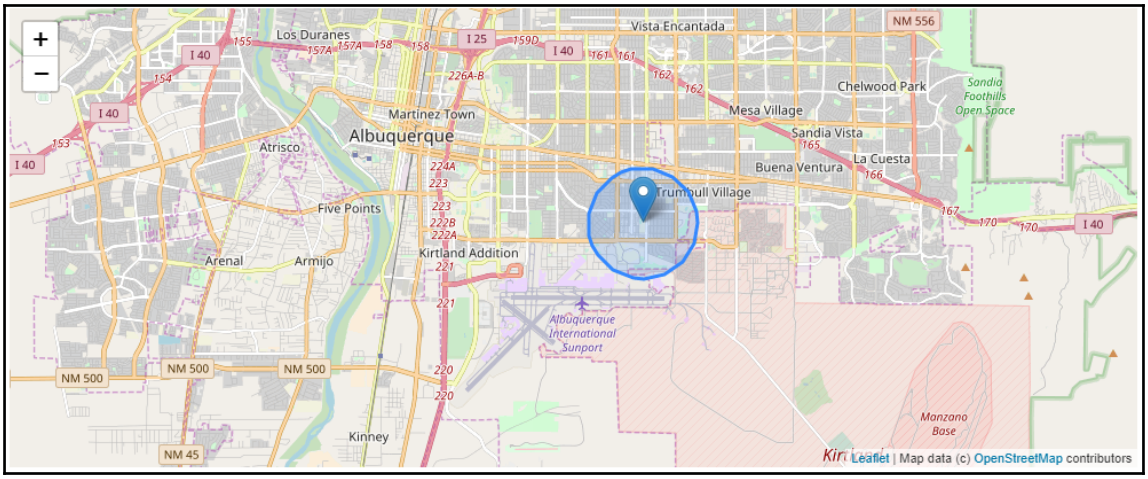


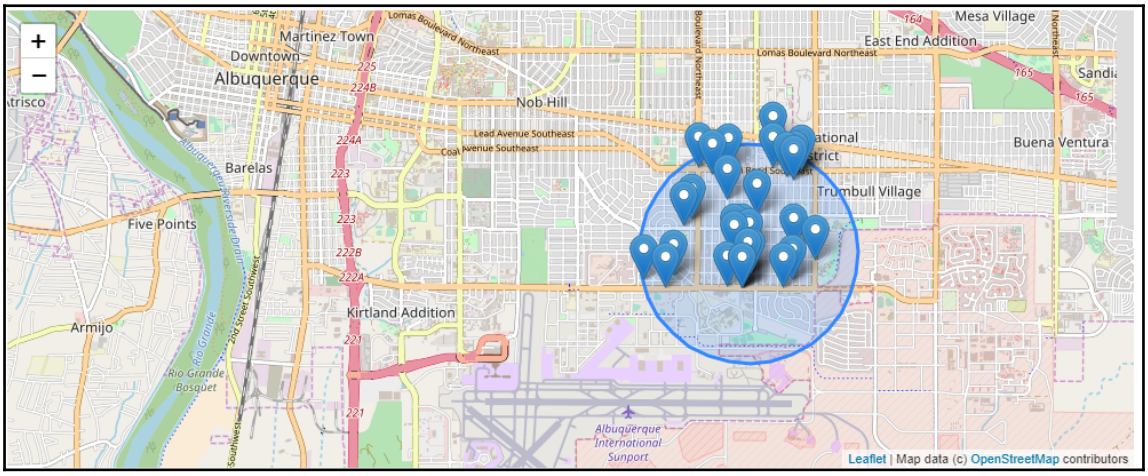

Rio Rancho
Sandia Mountain Wilderness Area
Albuquerque International Sunport
Kirtland Air Force Base
I 40
I 25
Leaflet | Map data (c) OpenStreetMap contributors

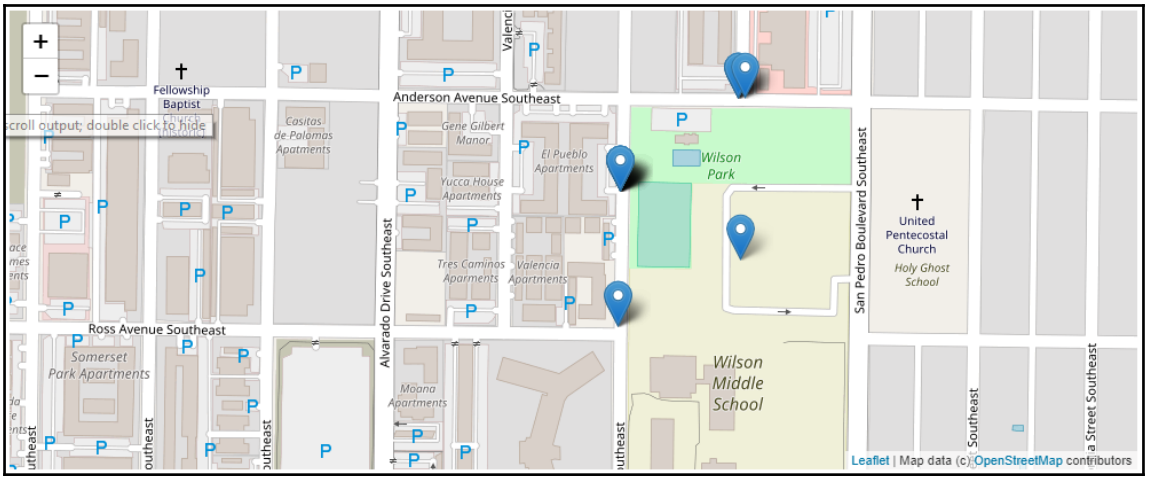

NM 423
NM 448
NM 556
NM 14
I 25
I 40
NM 47
NM 500
Petroglyph National Monument
Double Eagle II Airport
Albuquerque International Sunport
Leaflet | Map data (c) OpenStreetMap contributors


Albuquerque
Petroglyph National Monument
Double Eagle II Airport
Albuquerque International Sunport
Kirtland Air Force
NM 423
NM 448
NM 14
NM 47
NM 500
I 25
I 40
Leaflet | Map data (c) OpenStreetMap contributors


Petroglyph National Monument
Los Griegos
Los Candelarias
Los Duranes
Albuquerque
Atrisco
Five Points
Arenal
Armijo
Kirtland Addition
Eldorado Heights
Vista Encantada
Chelwood Park
Mesa Village
Sandia Vista
Buena Ventura
Trumbull Village
Sandia Foothills Open Space
NM 448
NM 556
I 25
I 40
Leaflet | Map data (c) OpenStreetMap contributors


Los Duranes
Vista Encantada
NM 556
I 40
I 25
Martinez Town
Albuquerque
Chelwood Park
Sandia Foothills Open Space
Mesa Village
Sandia Vista
Atrisco
Buena Ventura
La Cuesta
Trumbull Village
Five Points
Kirtland Addition
Arenal
Armijo
Albuquerque International Sunport
NM 500
NM 45
Kinney
Manzano Base
Leaflet | Map data (c) OpenStreetMap contributors

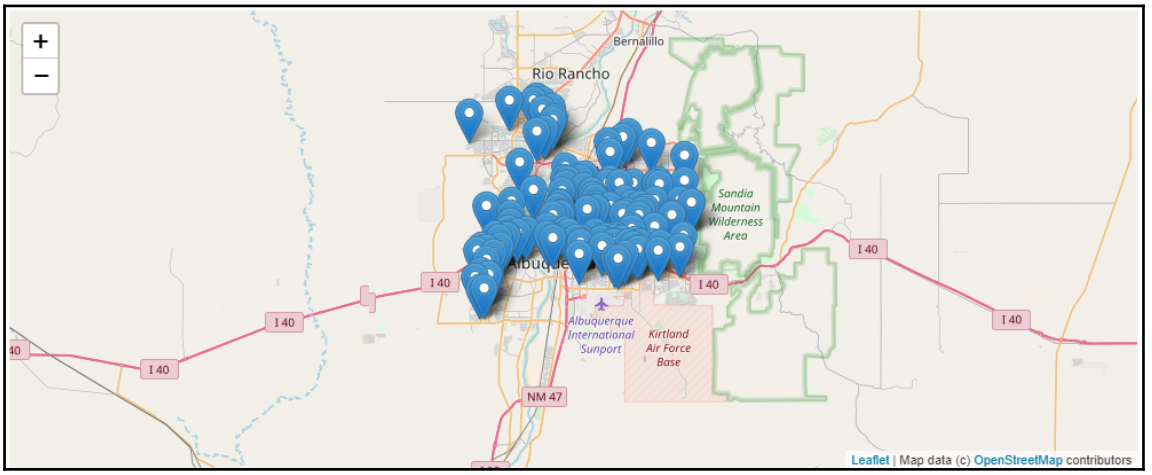

Martinez Town
Downtown
Albuquerque
Mesa Village
East End Addition
Nob Hill
Buena Ventura
Trumbull Village
Barelas
Five Points
Kirtland Addition
Armijo
Albuquerque International Sunport
Leaflet | Map data (c) OpenStreetMap contributors

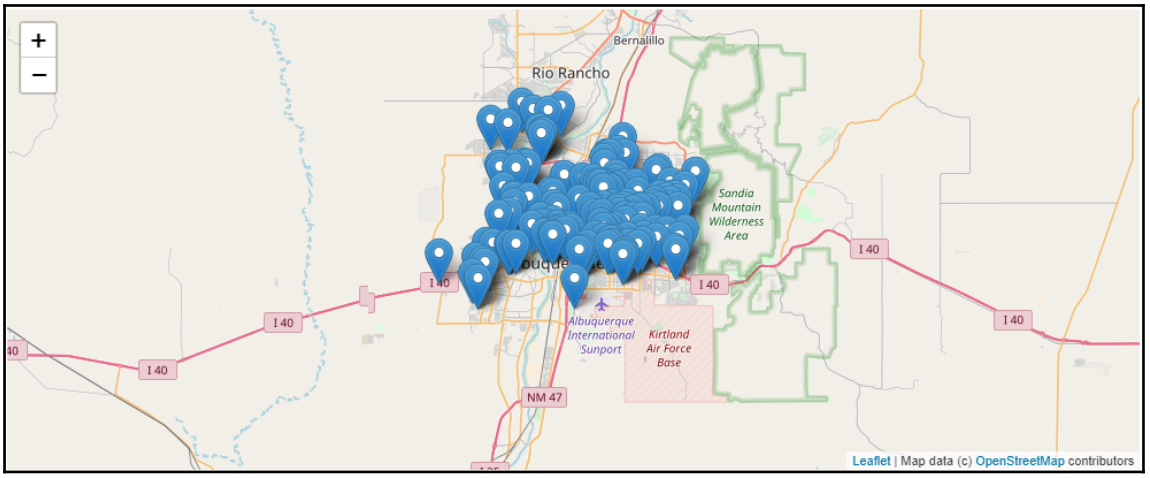



```
In [29]: @widgets.interact(x=DatePicker())
         def theDate(x):

             return str(x)
```

x 11/22/2017

```
'2017-11-22'
```





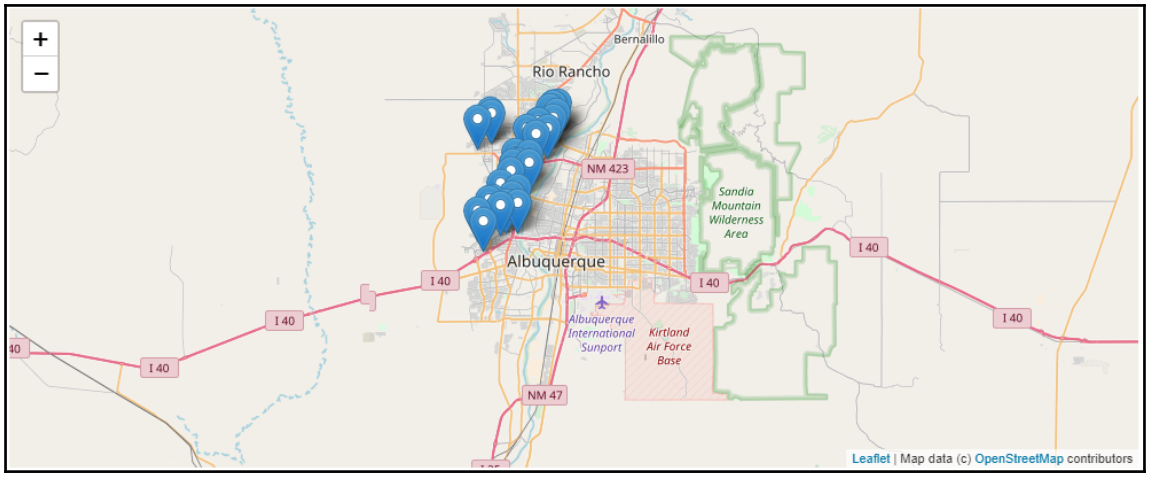
In [34]:
```
@widgets.interact(x="None")
def areaCommand(x):

    if x:
        for l in m.layers[1:]:
            m.remove_layer(l)
        cursor.execute("SELECT ST_AsGeoJSON(i.geom) FROM incidents i JOIN areacommand acmd ON ST_Intersects(acmd.geom, i.geom)
        c=cursor.fetchall()

        for x in c:
            layer=json.loads(x[0])
            layergeojson=GeoJSON(data=layer)
            m.add_layer(layergeojson)
        return c

    else:
        pass
```

x None

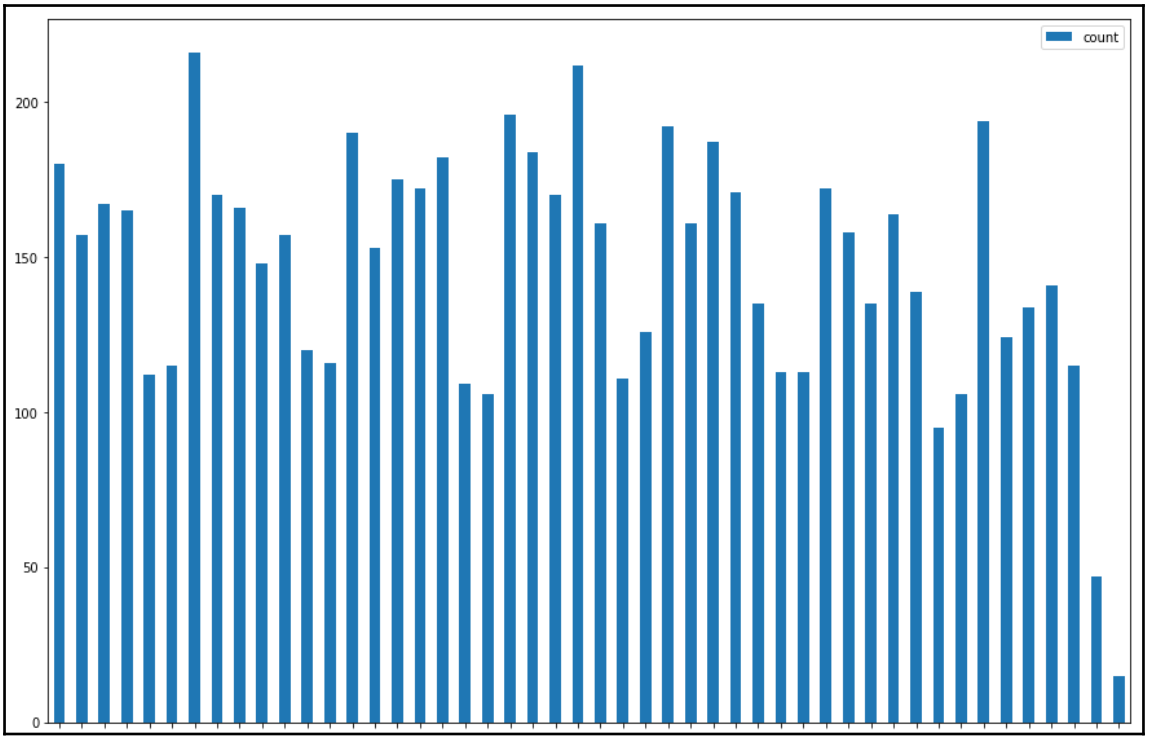
[]

x NORTHWEST

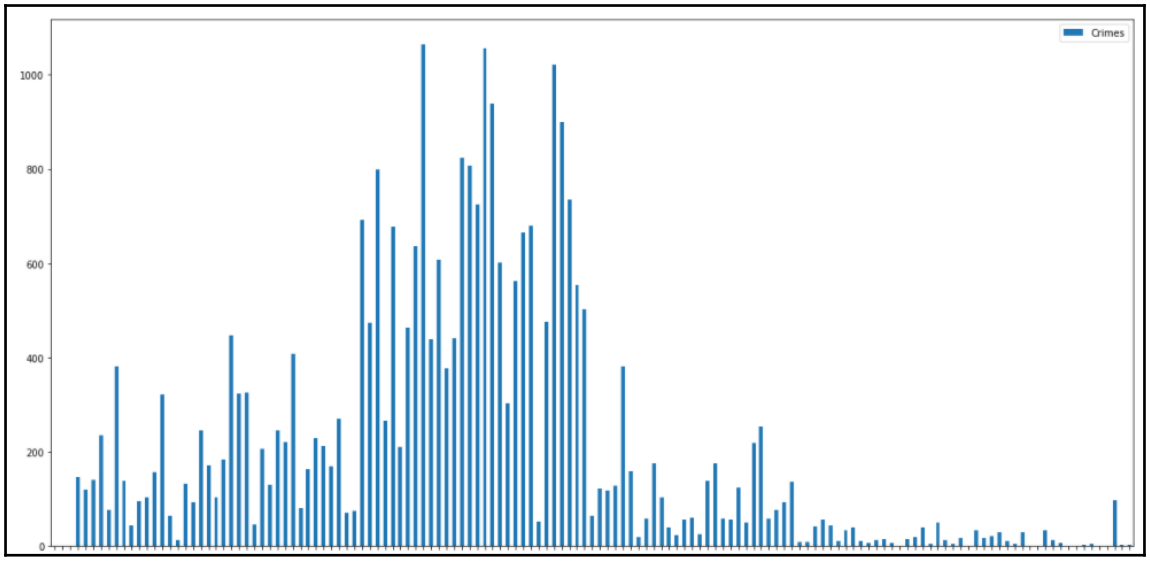

```
[('{"type":"Point","coordinates":[-106.711733243194,35.1098713550846]}',),
 ('{"type":"Point","coordinates":[-106.655683824035,35.2060045419773]}',),
 ('{"type":"Point","coordinates":[-106.686411508609,35.1829412107437]}',),
 ('{"type":"Point","coordinates":[-106.703657979881,35.1493086826256]}',),
 ('{"type":"Point","coordinates":[-106.697602558722,35.1246750028775]}',),
 ('{"type":"Point","coordinates":[-106.655433125799,35.1933328155158]}',),
 ('{"type":"Point","coordinates":[-106.729923405452,35.197342393655]}',),
 ('{"type":"Point","coordinates":[-106.718105925956,35.1080088212142]}',),
 ('{"type":"Point","coordinates":[-106.672925712103,35.1894973500514]}',),
 ('{"type":"Point","coordinates":[-106.684048998701,35.1485500784539]}',),
 ('{"type":"Point","coordinates":[-106.701263018333,35.1592793420069]}',),
 ('{"type":"Point","coordinates":[-106.66188893686,35.1826722919749]}',),
 ('{"type":"Point","coordinates":[-106.738651750264,35.0918937278029]}',),
 ('{"type":"Point","coordinates":[-106.745559617831,35.1019894719585]}',),
 ('{"type":"Point","coordinates":[-106.728399466573,35.1144476669129]}',),
 ('{"type":"Point","coordinates":[-106.71886074256,35.1293708118017]}',),
 ('{"type":"Point","coordinates":[-106.673288411391,35.1900456867706]}',),
 ('{"type":"Point","coordinates":[-106.698024406681,35.1098242309646]}',),
 ('{"type":"Point","coordinates":[-106.684583724467,35.1578885992953]}',),
 ('{"type":"Point","coordinates":[-106.650876685625,35.1987252625439]}',),
 ('{"type":"Point","coordinates":[-106.676428929709,35.1775339576113]}',),
 ('{"type":"Point","coordinates":[-106.697637614578,35.150720281939]}',),
```

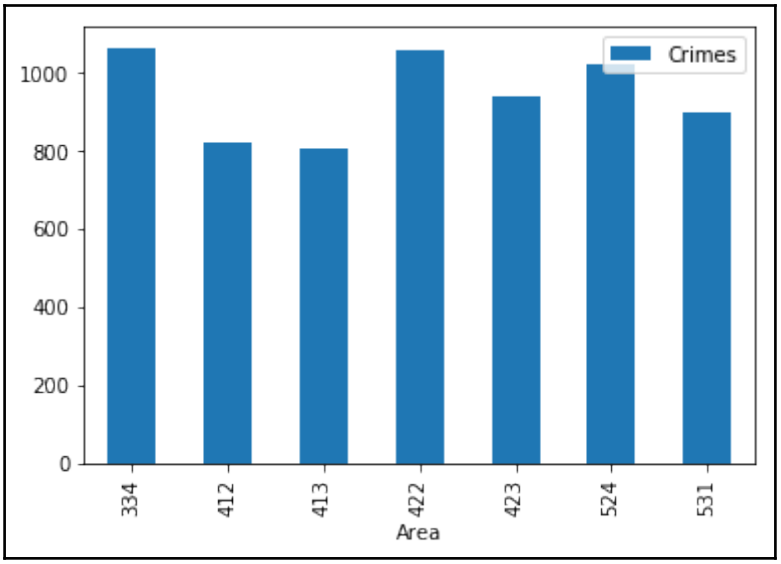



	date	count
0	2017-10-17	175
1	2017-10-08	216
2	2017-11-09	139
3	2017-11-03	113
4	2017-10-22	196



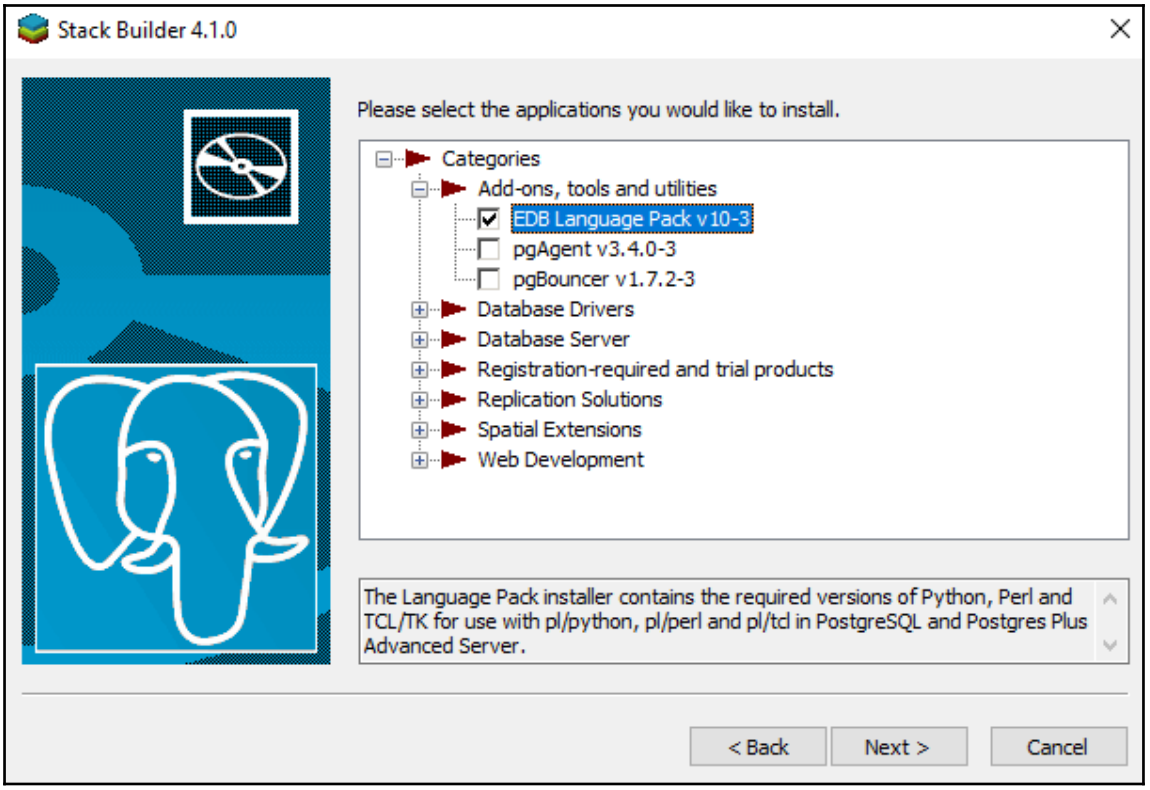
	Area	Agency	Crimes
0		APD	0
1		AVI	0
2	100	APD	0
3	111	APD	146
4	112	APD	120



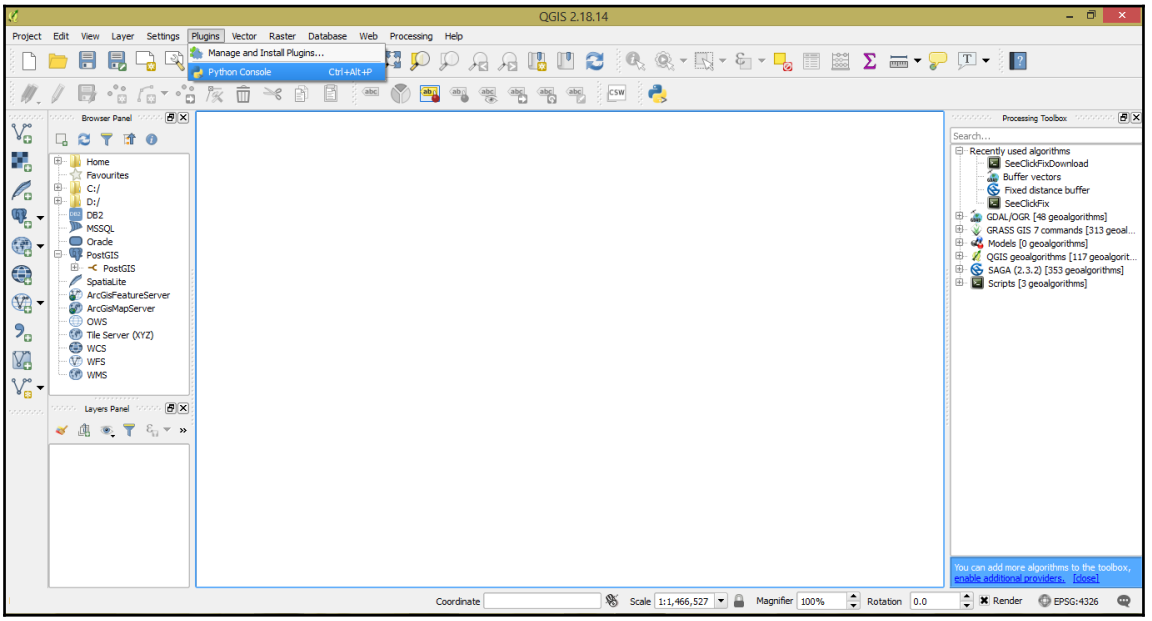


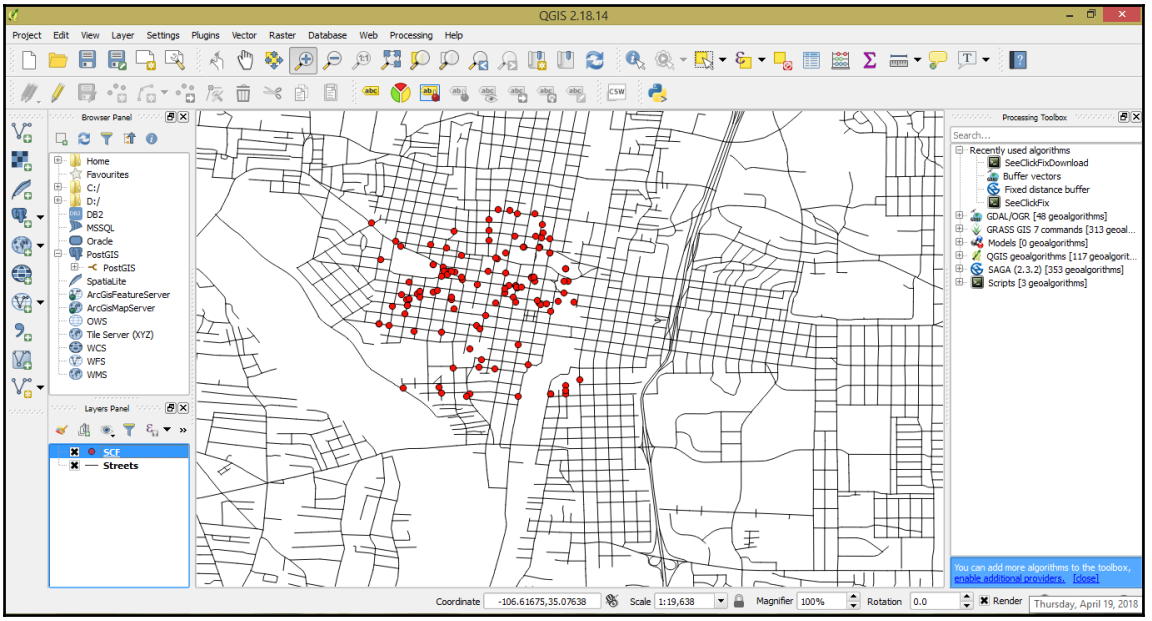

```
---------------------------------------------------------------------------
InternalError                             Traceback (most recent call last)
<ipython-input-61-e8f933e39904> in <module>()
      2 address="123 Sesame St"
      3
----> 4 cursor.execute("INSERT INTO incidents (address, geom) VALUES ('{}', ST_GeomFromText('{}'))".format(address, p.wkt))

InternalError: 123 Sesame St Must Include Crime Type
CONTEXT:  PL/pgSQL function newcrime() line 4 at RAISE
```

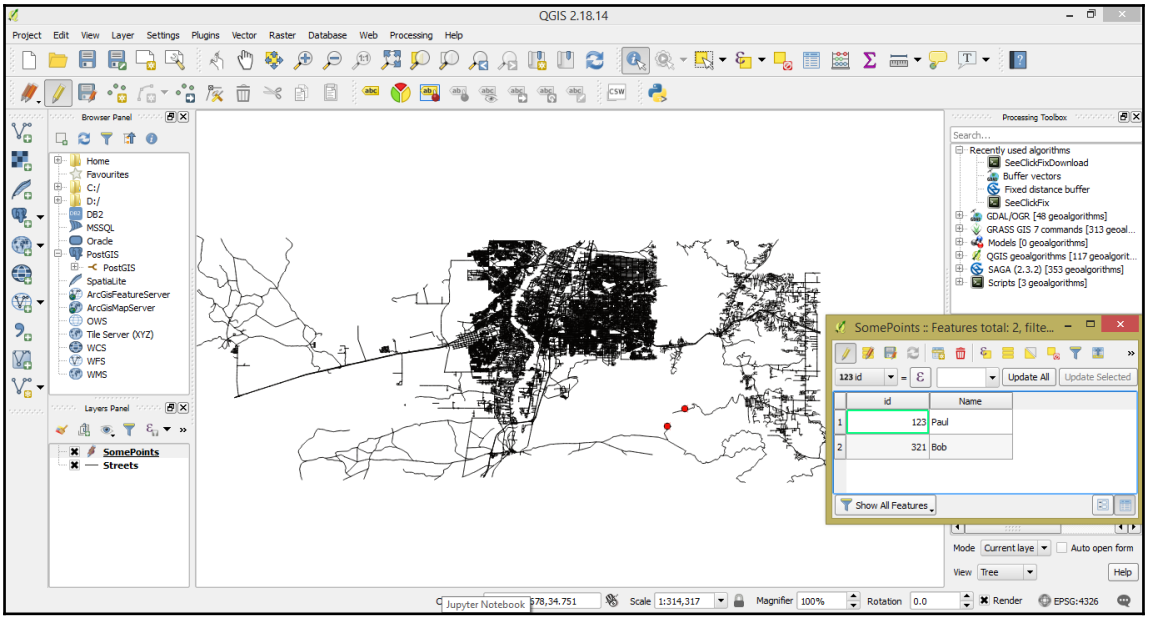
```
In [66]: cursor.execute("select * from incidents where address like '123 Sesame St'")
         cursor.fetchall()

Out[66]: []
```


Stack Builder 4.1.0
Please select the applications you would like to install.
Categories
Add-ons, tools and utilities
EDB Language Pack v10-3
pgAgent v3.4.0-3
pgBouncer v1.7.2-3
Database Drivers
Database Server
Registration-required and trial products
Replication Solutions
Spatial Extensions
Web Development
The Language Pack installer contains the required versions of Python, Perl and TCL/TK for use with pl/python, pl/perl and pl/tcl in PostgreSQL and Postgres Plus Advanced Server.
< Back
Next >
Cancel

Chapter 8: Automating QGIS Analysis






QGIS 2.18.14
Project Edit View Layer Settings Plugins Vector Raster Database Web Processing Help
Browser Panel
Home
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C:/
D:/
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MSSQL
Oracle
PostGIS
PostGIS
SpatiaLite
ArcGisFeatureServer
ArcGisMapServer
OWS
Tile Server (XYZ)
WCS
WFS
WMS
Layers Panel
SomePoints
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Processing Toolbox
Search...
Recently used algorithms
SeeClickFixDownload
Buffer vectors
Fixed distance buffer
SeeClickFix
GDAL/OGR [48 geoalgorithms]
GRASS GIS 7 commands [313 geoal...
Models [0 geoalgorithms]
QGIS geoalgorithms [117 geoalgorit...
SAGA (2.3.2) [353 geoalgorithms]
Scripts [3 geoalgorithms]
SomePoints :: Features total: 2, filte...
Update All
Update Selected
id
Name
1
123
Paul
2
321
Bob
Show All Features
Mode
Current laye
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Tree
Help
Jupyter Notebook
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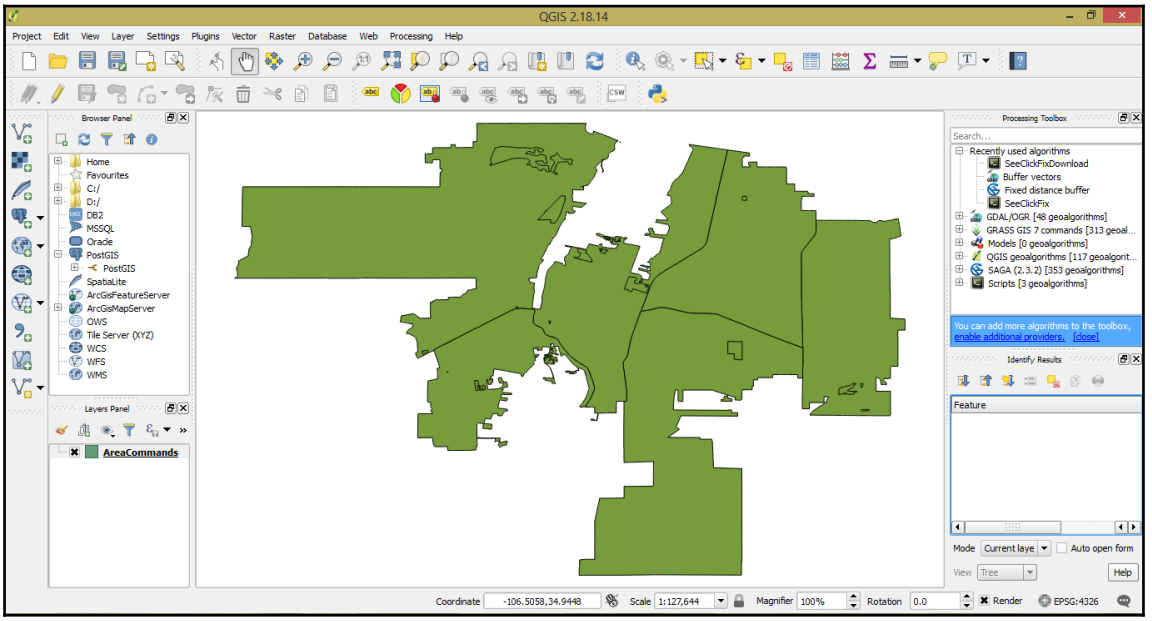
Magnifier
100%
Rotation
0.0
Render
EPSG:4326


QGIS 2.18.14
Project Edit View Layer Settings Plugins Vector Raster Database Web Processing Help
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SpatiaLite
ArcGisFeatureServer
ArcGisMapServer
OWS
Tile Server (XYZ)
WCS
WFS
WMS
Layers Panel
AreaCommands
Processing Toolbox
Search...
Recently used algorithms
SeeClickFixDownload
Buffer vectors
Fixed distance buffer
SeeClickFix
GDAL/OGR [48 geoalgorithms]
GRASS GIS 7 commands [313 geoal...
Models [0 geoalgorithms]
QGIS geoalgorithms [117 geoalgorit...
SAGA (2.3.2) [353 geoalgorithms]
Scripts [3 geoalgorithms]
You can add more algorithms to the toolbox, enable additional providers. [close]
Identify Results
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Mode
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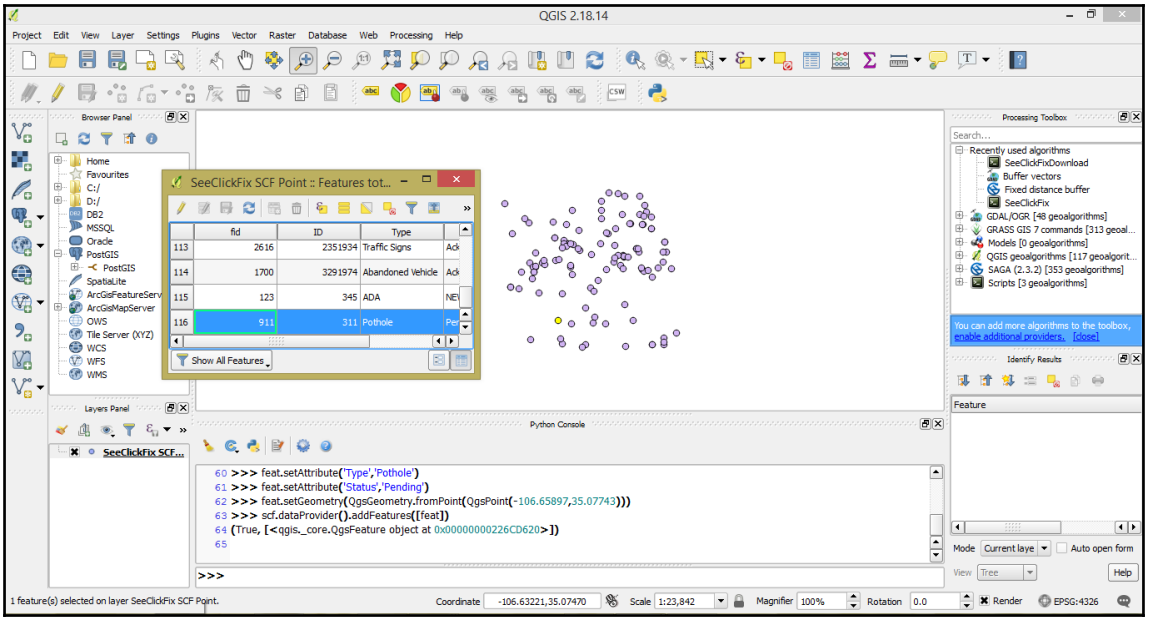
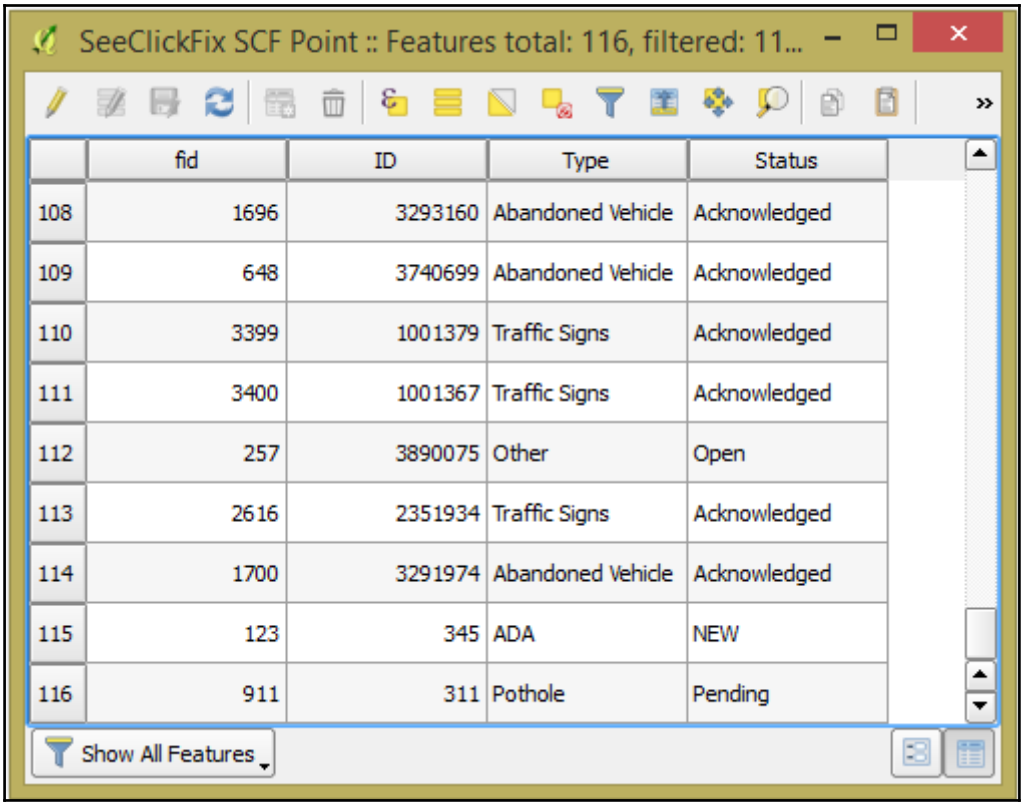
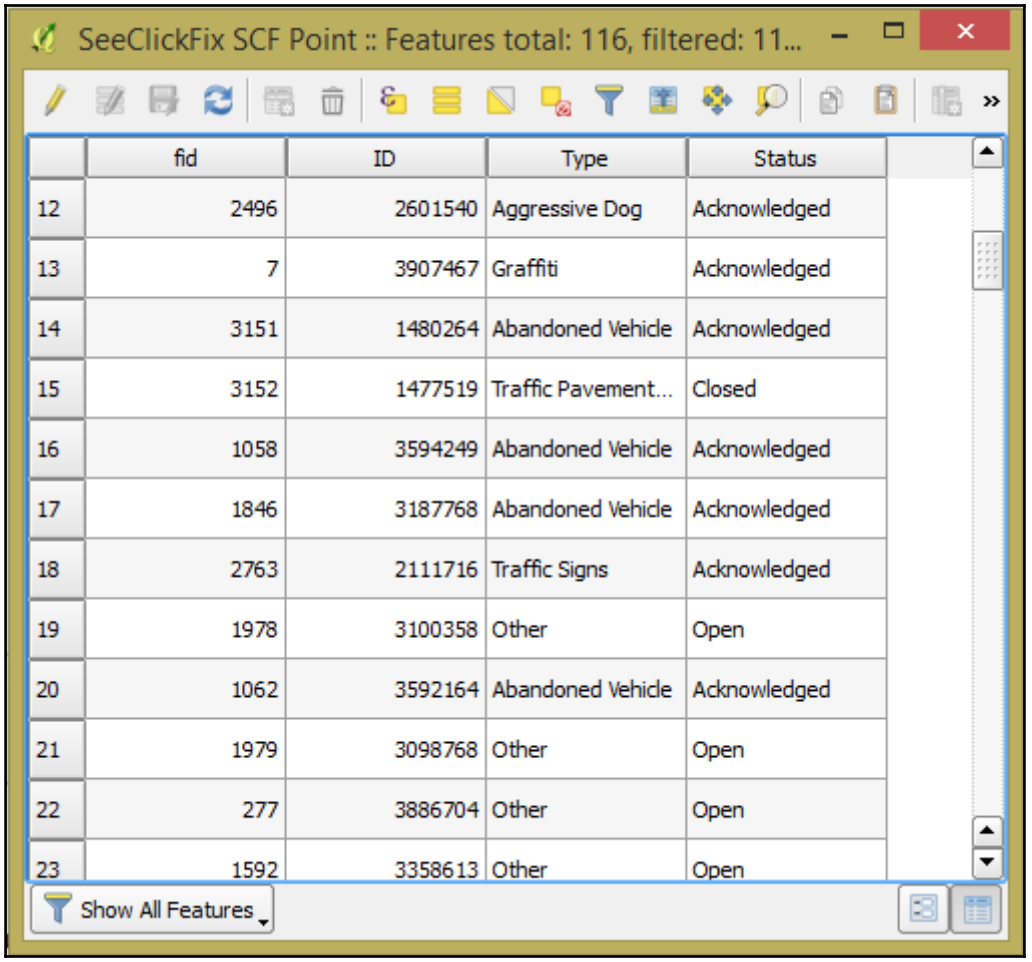
Auto open form
View
Tree
Help
Coordinate
-106.5058,34.9448
Scale
1:127,644
Magnifier
100%
Rotation
0.0
Render
EPSG:4326

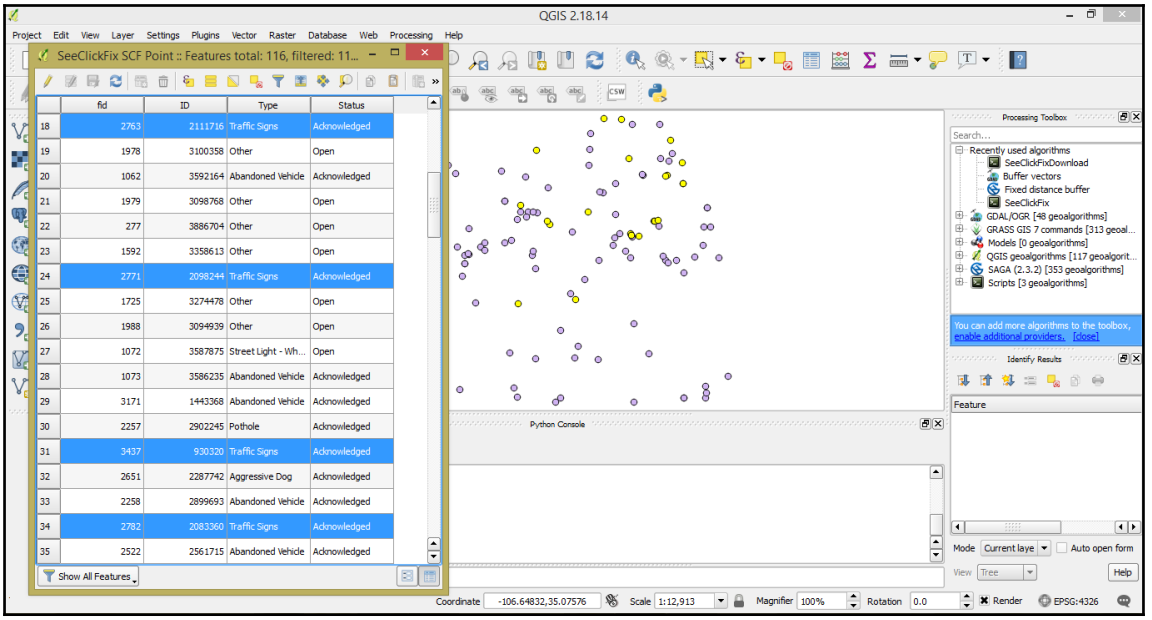

QGIS 2.18.14
Project Edit View Layer Settings Plugins Vector Raster Database Web Processing Help
Browser Panel
Home
Favourites
C:/
D:/
DB2
MSSQL
Oracle
PostGIS
PostGIS
SpatiaLite
ArcGisFeatureServ
ArcGisMapServer
OWS
Tile Server (XYZ)
WCS
WFS
WMS
SeeClickFix SCF Point :: Features tot...
fid ID Type
113 2616 2351934 Traffic Signs
114 1700 3291974 Abandoned Vehicle
115 123 345 ADA
116 911 311 Pothole
Show All Features
Processing Toolbox
Search...
Recently used algorithms
SeeClickFixDownload
Buffer vectors
Fixed distance buffer
SeeClickFix
GDAL/OGR [48 geoalgorithms]
GRASS GIS 7 commands [313 geoal...
Models [0 geoalgorithms]
QGIS geoalgorithms [117 geoalgorit...
SAGA (2.3.2) [353 geoalgorithms]
Scripts [3 geoalgorithms]
You can add more algorithms to the toolbox, enable additional providers. [close]
Identify Results
Feature
Layers Panel
SeeClickFix SCF...
Python Console
60 >>> feat.setAttribute('Type','Pothole')
61 >>> feat.setAttribute('Status','Pending')
62 >>> feat.setGeometry(QgsGeometry.fromPoint(QgsPoint(-106.65897,35.07743)))
63 >>> scf.dataProvider().addFeatures([feat])
64 (True, [<qgis._core.QgsFeature object at 0x00000000226CD620>])
65
>>>
Mode Current laye Auto open form
View Tree Help
1 feature(s) selected on layer SeeClickFix SCF Point.
Coordinate -106.63221,35.07470 Scale 1:23,842 Magnifier 100% Rotation 0.0 Render EPSG:4326

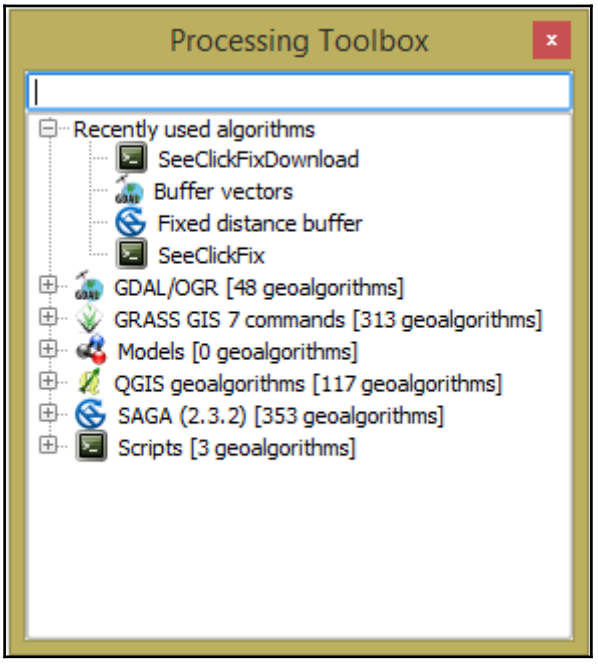


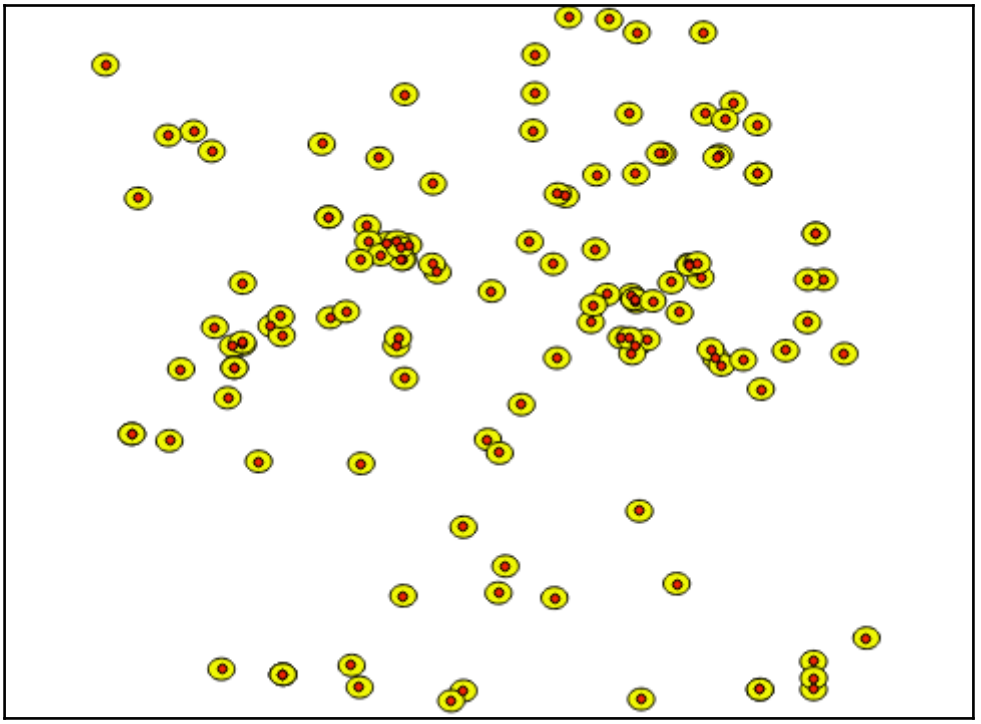
	fid	ID	Type	Status
108	1696	3293160	Abandoned Vehicle	Acknowledged
109	648	3740699	Abandoned Vehicle	Acknowledged
110	3399	1001379	Traffic Signs	Acknowledged
111	3400	1001367	Traffic Signs	Acknowledged
112	257	3890075	Other	Open
113	2616	2351934	Traffic Signs	Acknowledged
114	1700	3291974	Abandoned Vehicle	Acknowledged
115	123	345	ADA	NEW
116	911	311	Pothole	Pending



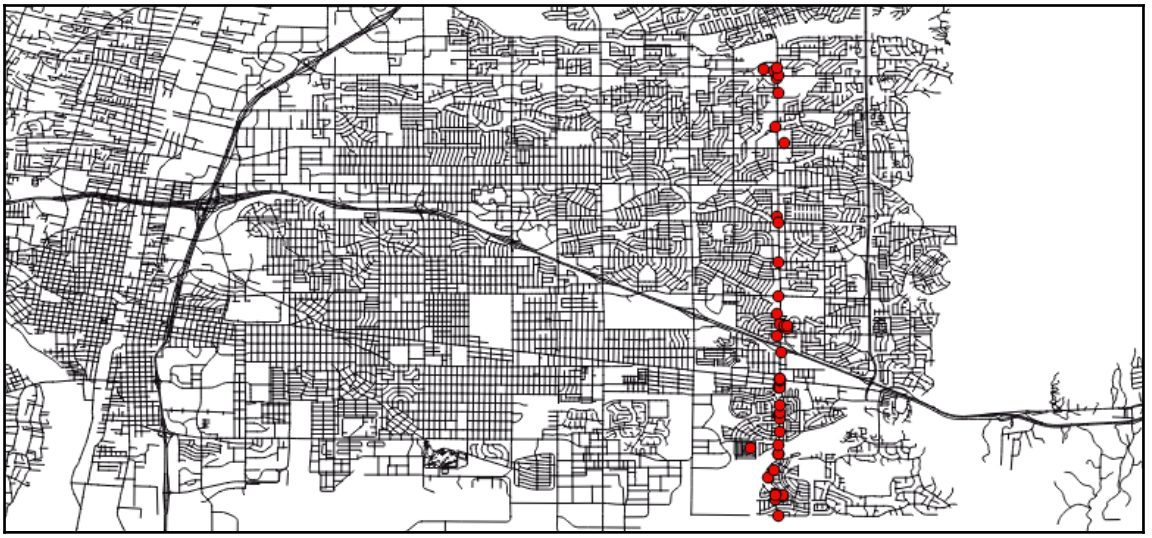
	fid	ID	Type	Status
12	2496	2601540	Aggressive Dog	Acknowledged
13	7	3907467	Graffiti	Acknowledged
14	3151	1480264	Abandoned Vehicle	Acknowledged
15	3152	1477519	Traffic Pavement...	Closed
16	1058	3594249	Abandoned Vehicle	Acknowledged
17	1846	3187768	Abandoned Vehicle	Acknowledged
18	2763	2111716	Traffic Signs	Acknowledged
19	1978	3100358	Other	Open
20	1062	3592164	Abandoned Vehicle	Acknowledged
21	1979	3098768	Other	Open
22	277	3886704	Other	Open
23	1592	3358613	Other	Open


QGIS 2.18.14
Project Edit View Layer Settings Plugins Vector Raster Database Web Processing Help
SeeClickFix SCF Point :: Features total: 116, filtered: 11...
fid ID Type Status
18 2763 2111716 Traffic Signs Acknowledged
19 1978 3100358 Other Open
20 1062 3592164 Abandoned Vehicle Acknowledged
21 1979 3098768 Other Open
22 277 3886704 Other Open
23 1592 3358613 Other Open
24 2771 2098244 Traffic Signs Acknowledged
25 1725 3274478 Other Open
26 1988 3094939 Other Open
27 1072 3587875 Street Light - Wh... Open
28 1073 3586235 Abandoned Vehicle Acknowledged
29 3171 1443368 Abandoned Vehicle Acknowledged
30 2257 2902245 Pothole Acknowledged
31 3437 930320 Traffic Signs Acknowledged
32 2651 2287742 Aggressive Dog Acknowledged
33 2258 2899693 Abandoned Vehicle Acknowledged
34 2782 2083360 Traffic Signs Acknowledged
35 2522 2561715 Abandoned Vehicle Acknowledged
Show All Features
Processing Toolbox
Search...
Recently used algorithms
SeeClickFixDownload
Buffer vectors
Fixed distance buffer
SeeClickFix
GDAL/OGR [48 geoalgorithms]
GRASS GIS 7 commands [313 geoal...
Models [0 geoalgorithms]
QGIS geoalgorithms [117 geoalgorit...
SAGA (2.3.2) [353 geoalgorithms]
Scripts [3 geoalgorithms]
You can add more algorithms to the toolbox, enable additional providers. [close]
Identify Results
Feature
Python Console
Mode Current laye Auto open form
View Tree Help
Coordinate -106.64832,35.07576 Scale 1:12,913 Magnifier 100% Rotation 0.0 Render EPSG:4326


Processing Toolbox
Recently used algorithms
SeeClickFixDownload
Buffer vectors
Fixed distance buffer
SeeClickFix
GDAL/OGR [48 geoalgorithms]
GRASS GIS 7 commands [313 geoalgorithms]
Models [0 geoalgorithms]
QGIS geoalgorithms [117 geoalgorithms]
SAGA (2.3.2) [353 geoalgorithms]
Scripts [3 geoalgorithms]



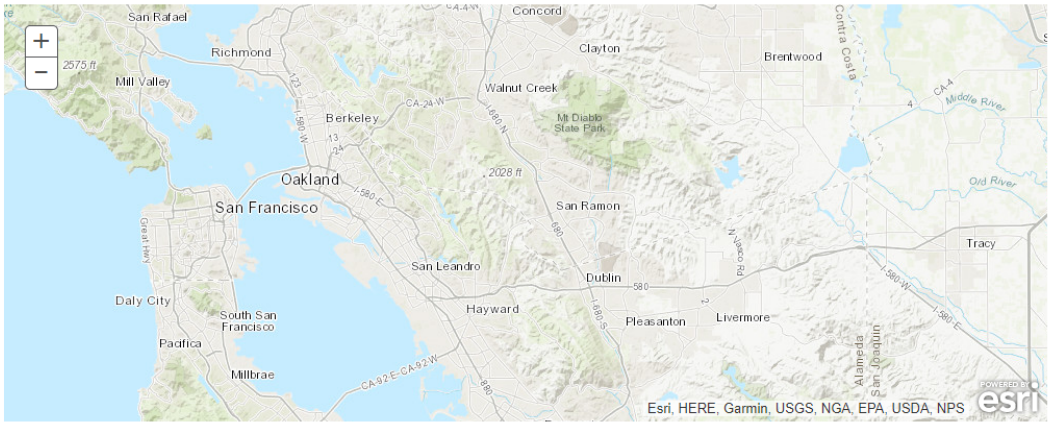

SeeClickFix
Parameters
Log
Run as batch process...
City or Neighborhood
City
Filter
Nothing
Output
[Save to temporary file]
...
Open output file after running algorithm
0%
Run
Close



Chapter 9: ArcGIS API for Python and ArcGIS Online

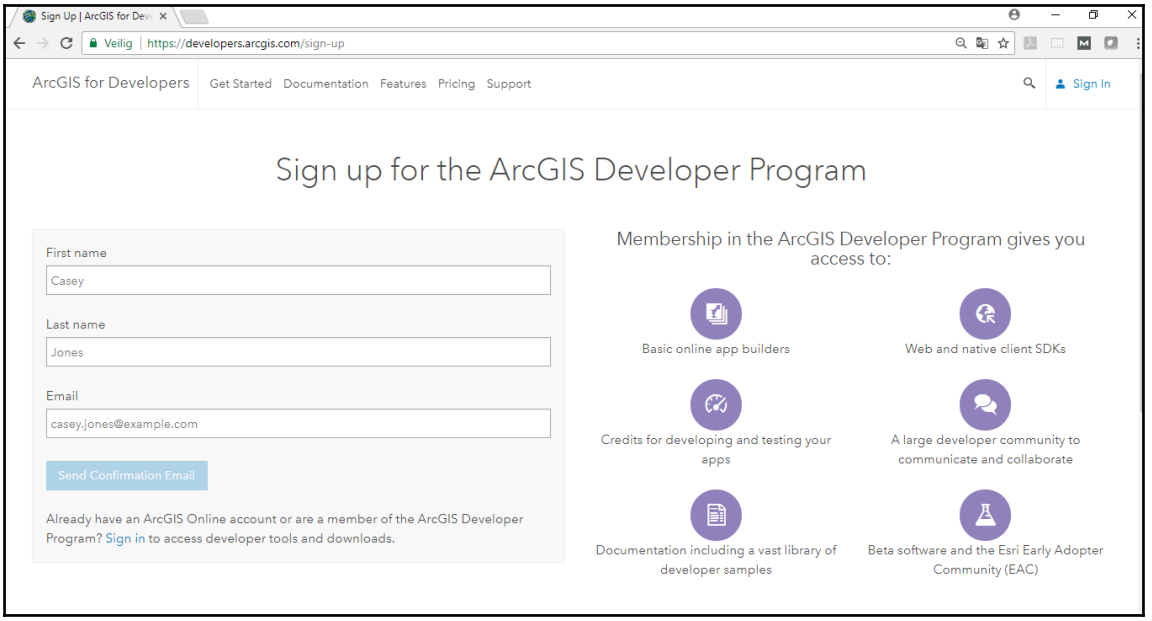
```
The following NEW packages will be INSTALLED:

    arcgis:             1.3.0-py36hbb13de3_1  esri
    bleach:             2.1.1-py36h834942a_0
    colorama:           0.3.9-py36h029ae33_0
    decorator:          4.1.2-py36he63a57b_0
    entrypoints:        0.2.3-py36hfd66bb0_2
    html5lib:           1.0.1-py36h047fa9f_0
    icc_rt:             2017.0.4-h97af966_0
    intel-openmp:       2018.0.0-hd92c6cd_8
    ipykernel:          4.7.0-py36h2f9c1c0_0
    ipython:            6.2.1-py36h9cf0123_1
    ipython_genutils:   0.2.0-py36h3c5d0ee_0
    ipywidgets:         6.0.0-py36_0
```

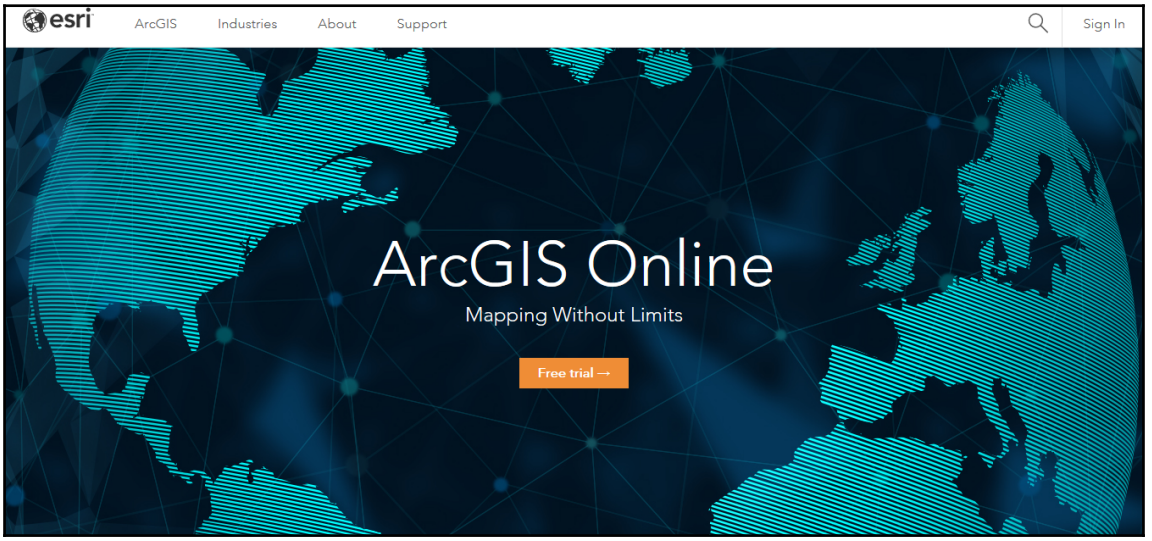
```
In [3]: map1 = gis.map('San Francisco')
        map1
```

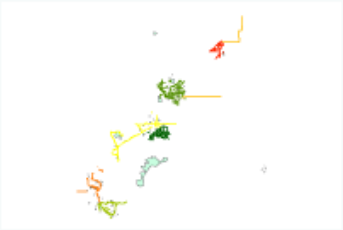


```
map1.add_class
map1.add_layer
map1.add_traits
map1.basemap
map1.basemaps
map1.center
map1.class_config_rst_doc
map1.class_config_section
map1.class_get_help
map1.class_get_trait_help
In [ ]: map1.
```

```
In [3]: map1 = gis.map('San Francisco')
        map1
```


Sign Up | ArcGIS for Dev
Veilig | https://developers.arcgis.com/sign-up
ArcGIS for Developers
Get Started
Documentation
Features
Pricing
Support
Sign In
Sign up for the ArcGIS Developer Program
First name
Casey
Last name
Jones
Email
casey.jones@example.com
Send Confirmation Email
Already have an ArcGIS Online account or are a member of the ArcGIS Developer Program? Sign in to access developer tools and downloads.
Membership in the ArcGIS Developer Program gives you access to:
Basic online app builders
Web and native client SDKs
Credits for developing and testing your apps
A large developer community to communicate and collaborate
Documentation including a vast library of developer samples
Beta software and the Esri Early Adopter Community (EAC)


esri
ArcGIS
Industries
About
Support
Sign In
ArcGIS Online
Mapping Without Limits
Free trial →



BikeTrails

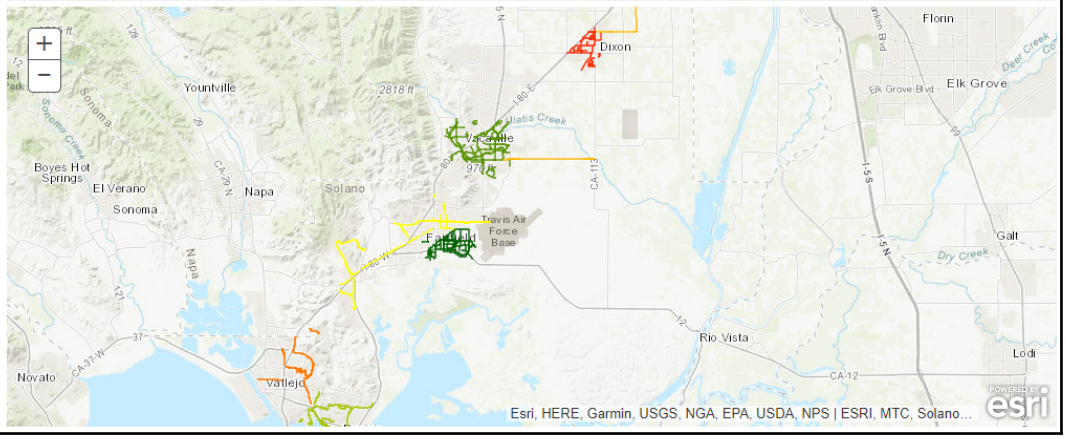
Service layer showing the bike trails customized for Solano County.

Feature Layer Collection by jlgoicochea
Last Modified: December 20, 2017
0 comments, 53 views

Out[13]:

	City	FIPS	GlobalID	LASTEDITOR	LASTUPDATE	LastDateEd	NAME_PCASE	OBJECTID	ParkName	SHAPESTLen	STRNAME	Shape_Le_2
0	Vacaville	095	26e2b128-2807-4d21-baac-a8301f28b769	D. Brownell	None	1.487030e+12	Solano	1		1095.065524	Orange Tree Cir	2813.794665
1	Vacaville	095	f1550bcc-e86c-447a-9a2c-edfce5232e92	D. Brownell	None	1.487030e+12	Solano	2		956.589403	Fruitville Rd	2463.651154
2	Vacaville	095	a5048391-4fc2-435d-a089-68afa3303244	D. Brownell	None	1.487030e+12	Solano	3		1890.319478	Elmira Rd	4869.496672
3	Vacaville	095	b0ff14c1-5e84-4ca9-b4d3-4d4038e14e41	D. Brownell	None	1.487030e+12	Solano	4		570.585094	Marshall Rd	1470.048489
4	Vacaville	095	0a64de95-93ce-4d72-a3a3-7179d6f493a2	D. Brownell	None	1.487030e+12	Solano	5		542.662844	Foothill Dr	1396.921075

In [144]:
```
map.add_layer(bike_trails_layer)
map
```



Out[11]:

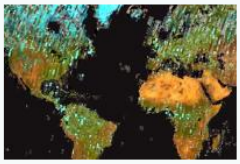
Bike Trails

This map service shows bike trails in Solano County

Web Map by

Last Modified: December 27, 2017

0 comments, 0 views



Landsat 8 Views

Landsat 8 OLI, 30m Multispectral 8 band scenes with visual renderings and indices. Updated daily.

Imagery Layer by esri

Last Modified: October 06, 2017

0 comments, 135,763 views

MDA NaturalVue Satellite Imagery

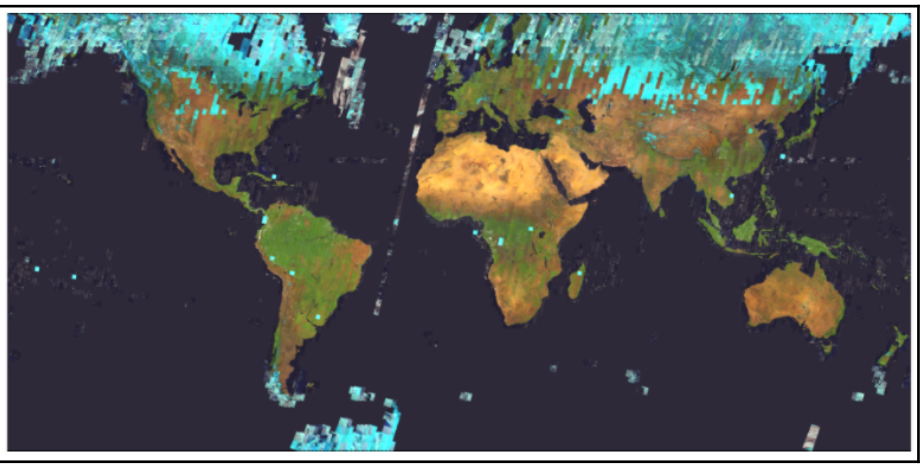
This image service presents NaturalVue 15m satellite imagery of the world created by MDA Information Systems Inc.

Imagery Layer by esri

Last Modified: August 25, 2017

0 comments, 42,934 views

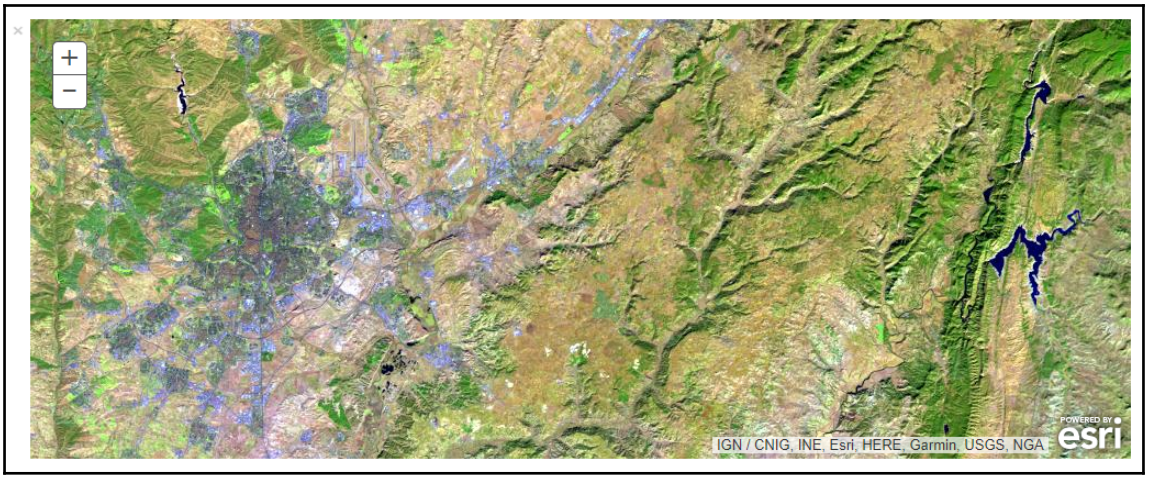
Out[15]:



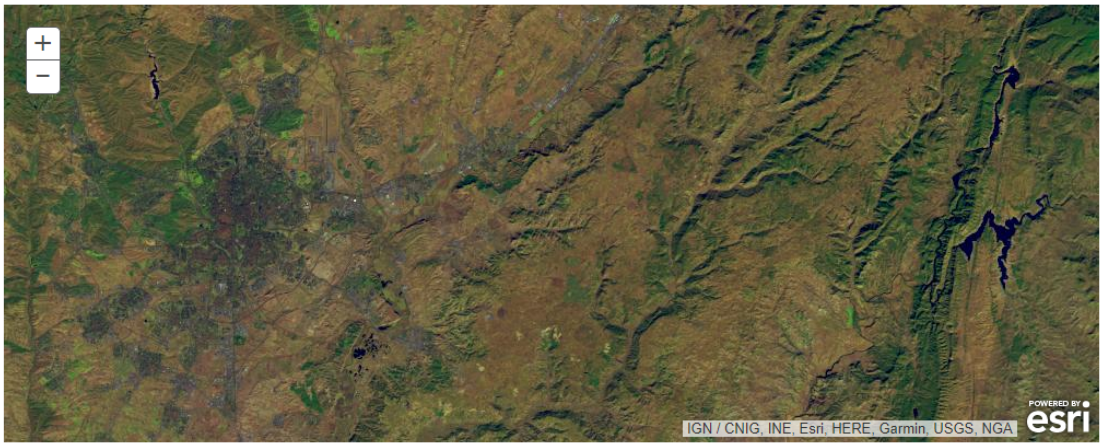
Out[13]:

	BandName	WavelengthMax	WavelengthMin
0	CoastalAerosol	450	430
1	Blue	510	450
2	Green	590	530
3	Red	670	640
4	NearInfrared	880	850
5	ShortWaveInfrared_1	1650	1570
6	ShortWaveInfrared_2	2290	2110
7	Cirrus	1380	1360

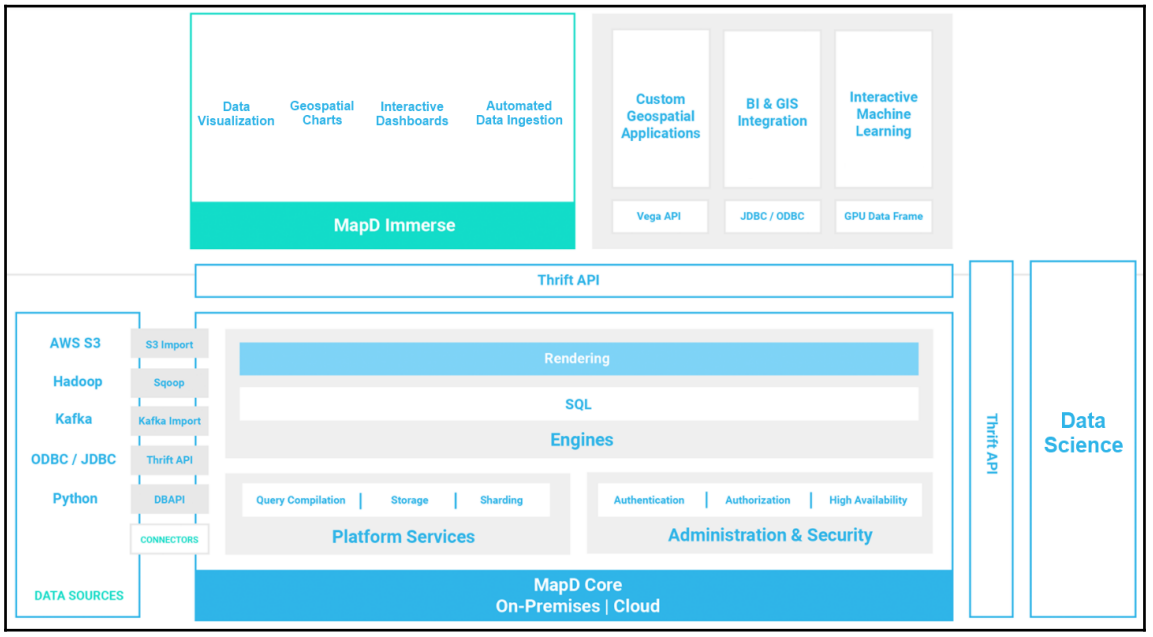
```
Agriculture with DRA
Bathymetric with DRA
Color Infrared with DRA
Natural Color with DRA
Short-wave Infrared with DRA
Geology with DRA
Agriculture
Bathymetric
Color Infrared
Geology
Natural Color
Short-wave Infrared
NDVI Colorized
Normalized Difference Moisture Index Colorized
NDVI Raw
NBR Raw
None
```

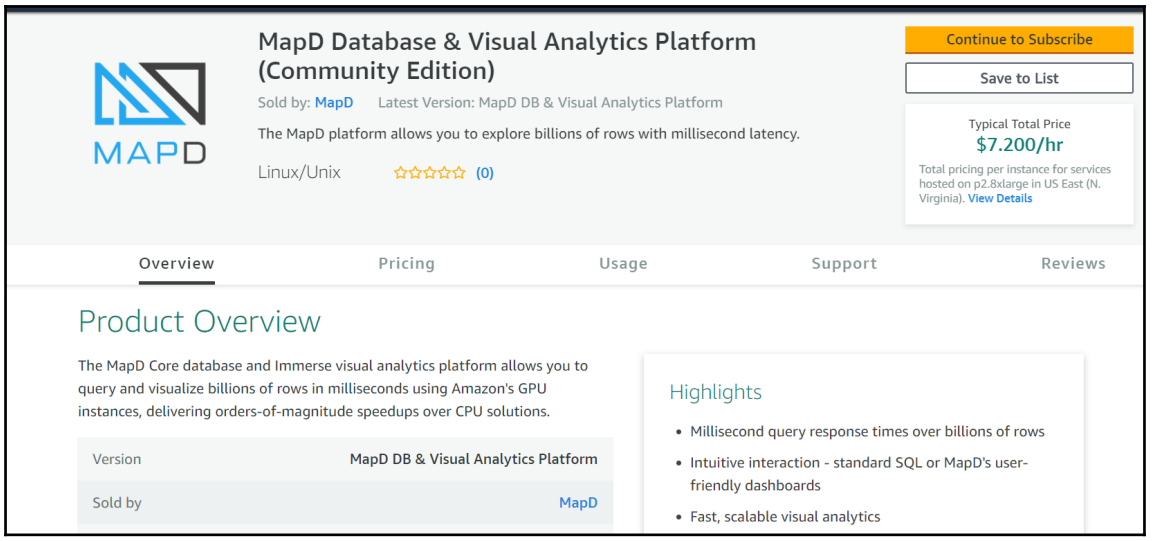

IGN / CNIG, INE, Esri, HERE, Garmin, USGS, NGA
esri

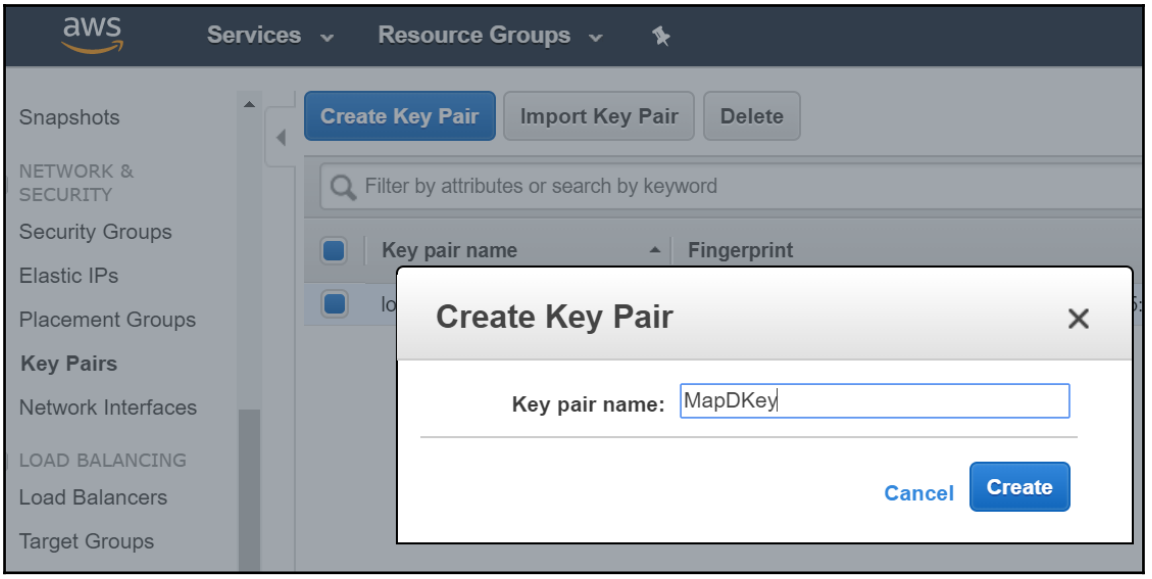

IGN / CNIG, INE, Esri, HERE, Garmin, USGS, NGA
esri

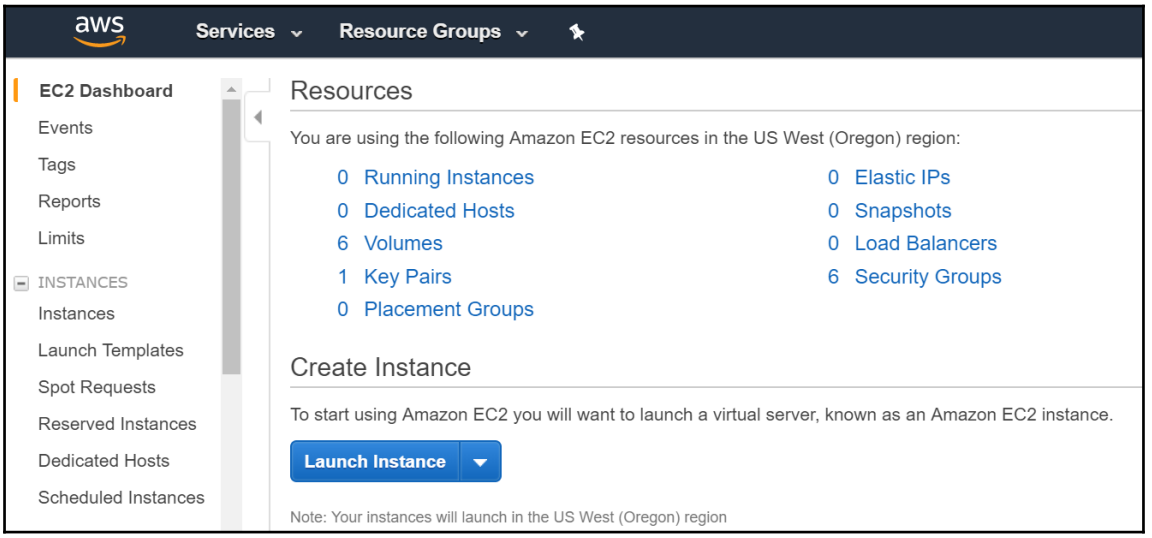

IGN / CNIG, INE, Esri, HERE, Garmin, USGS, NGA
POWERED BY esri

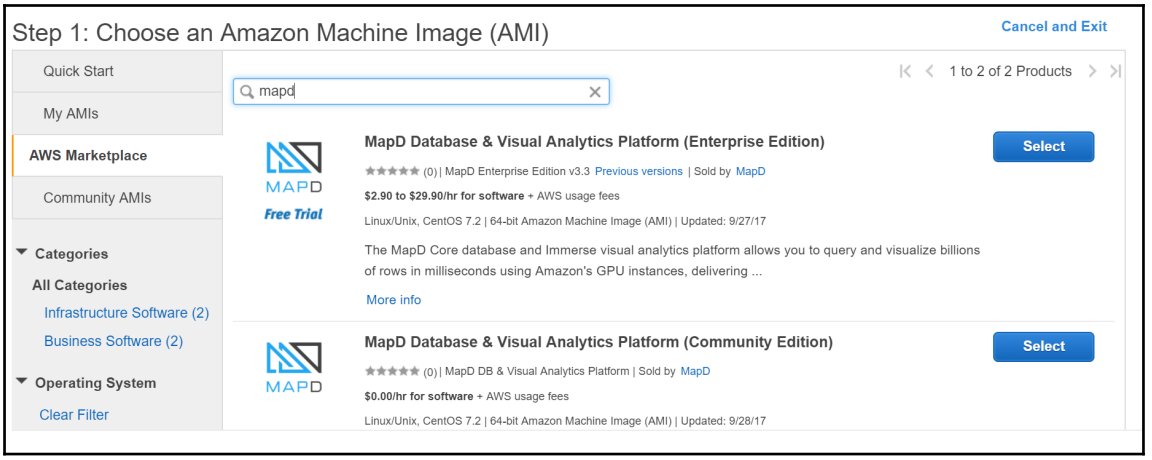
Chapter 10: Geoprocessing with a GPU Database

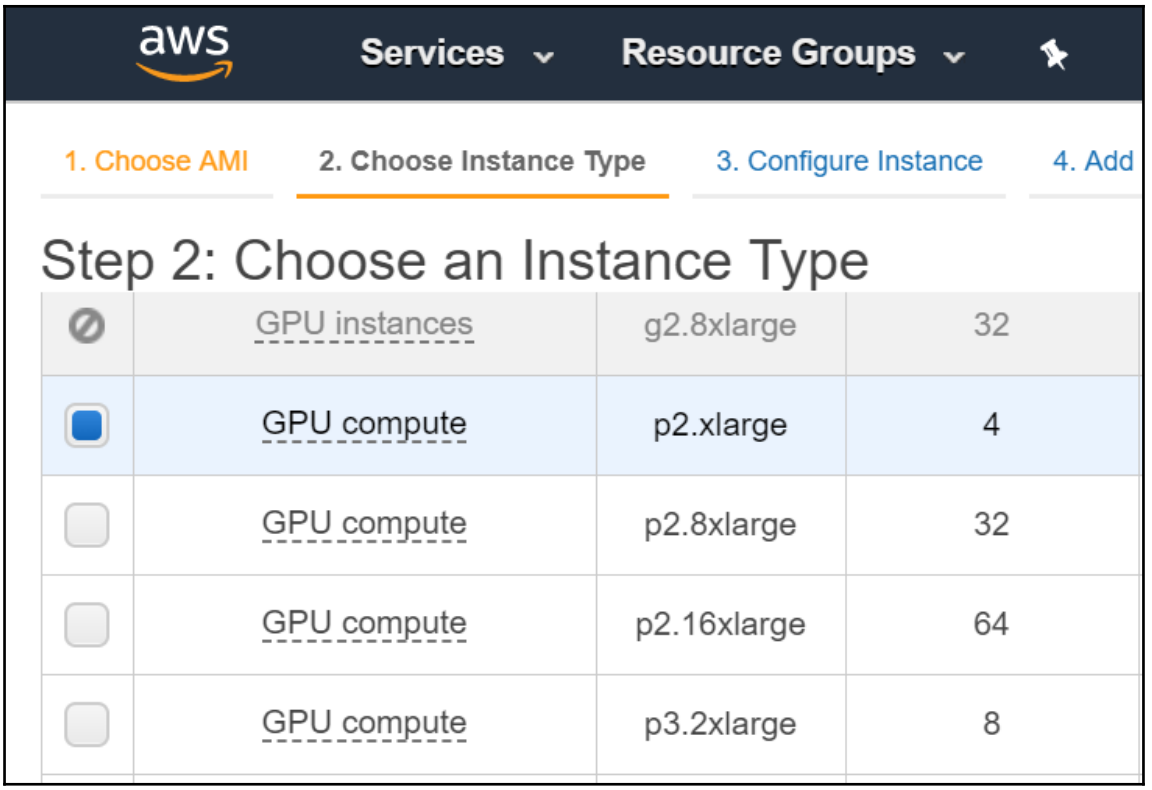


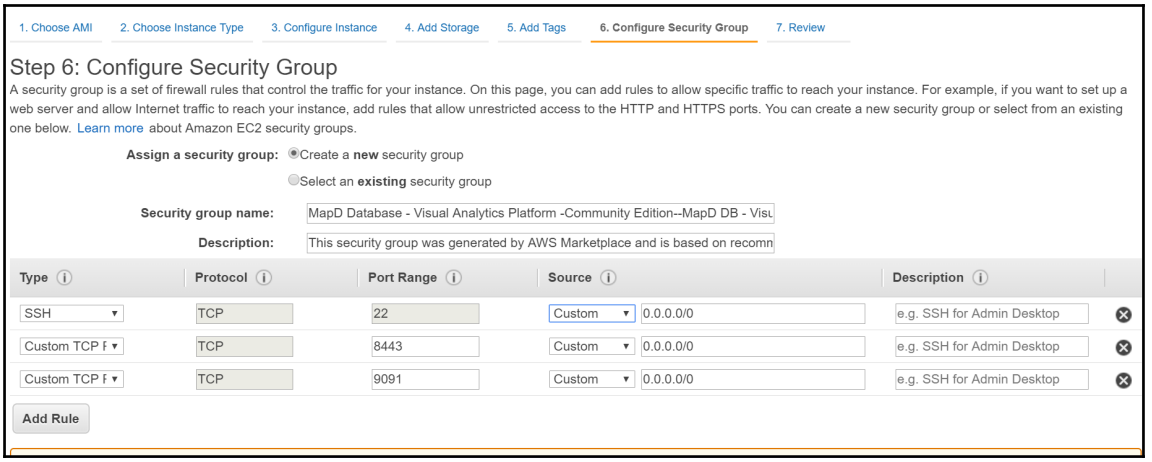


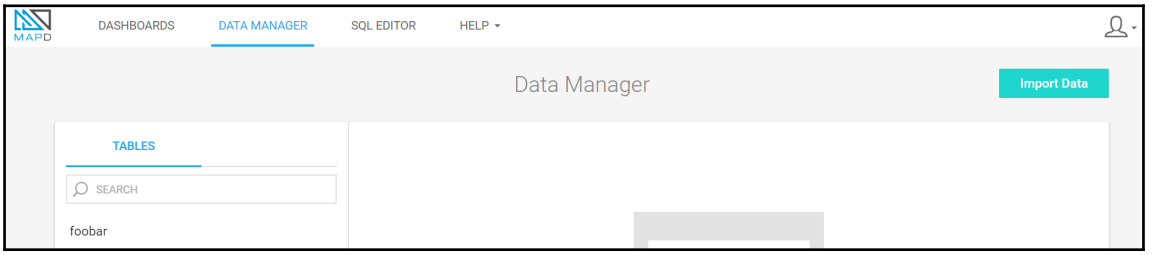

aws
Services
Resource Groups
Snapshots
NETWORK & SECURITY
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
LOAD BALANCING
Load Balancers
Target Groups
Create Key Pair
Import Key Pair
Delete
Filter by attributes or search by keyword
Key pair name
Fingerprint
Create Key Pair
Key pair name:
MapDKey
Cancel
Create

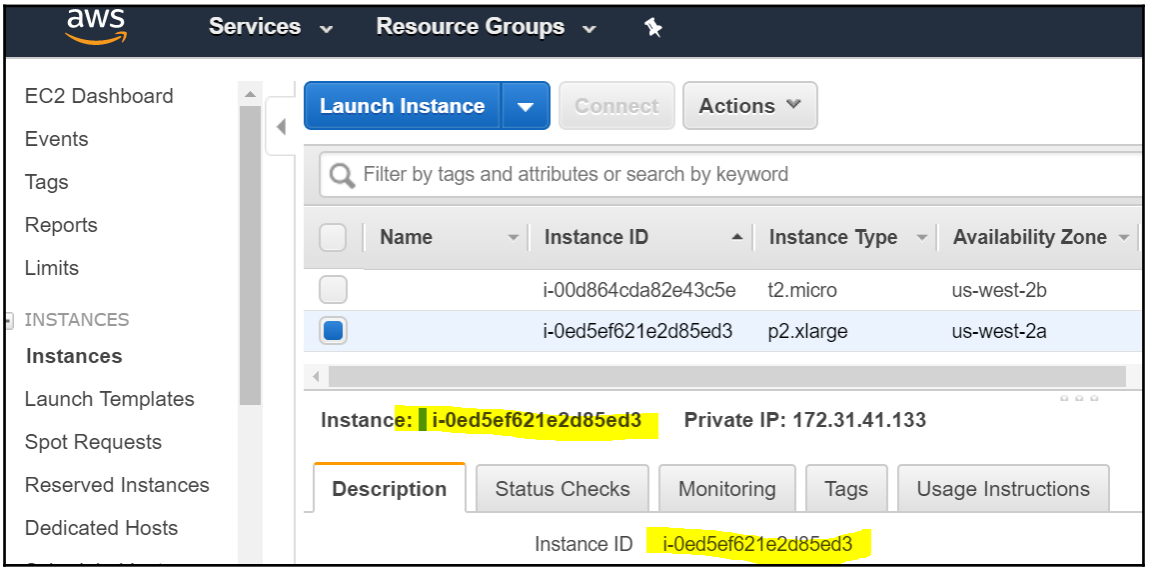

aws
Services
Resource Groups
EC2 Dashboard
Events
Tags
Reports
Limits
INSTANCES
Instances
Launch Templates
Spot Requests
Reserved Instances
Dedicated Hosts
Scheduled Instances
Resources
You are using the following Amazon EC2 resources in the US West (Oregon) region:
0 Running Instances
0 Dedicated Hosts
6 Volumes
1 Key Pairs
0 Placement Groups
0 Elastic IPs
0 Snapshots
0 Load Balancers
6 Security Groups
Create Instance
To start using Amazon EC2 you will want to launch a virtual server, known as an Amazon EC2 instance.
Launch Instance
Note: Your instances will launch in the US West (Oregon) region

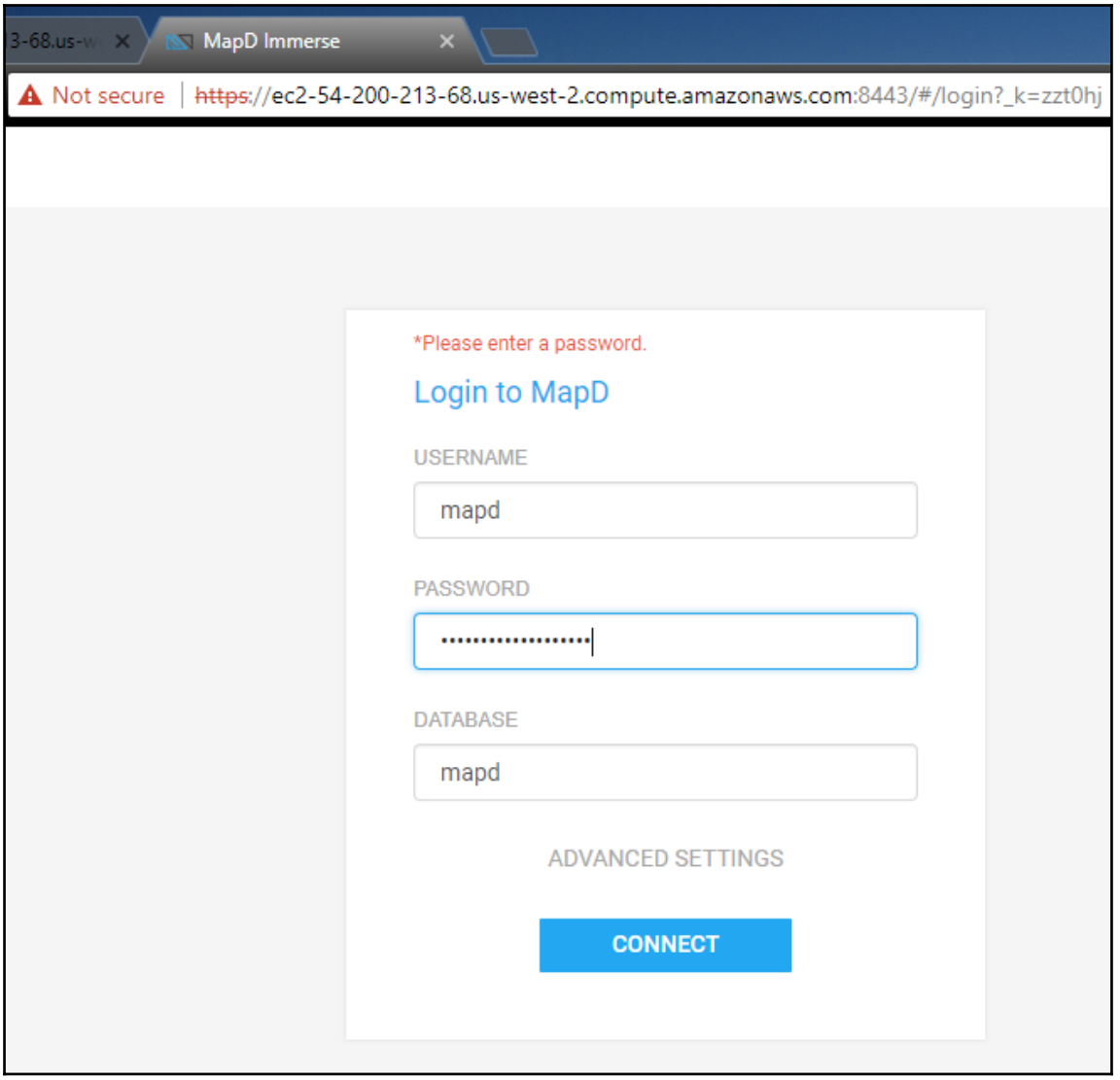

Step 1: Choose an Amazon Machine Image (AMI)
Cancel and Exit
Quick Start
My AMIs
AWS Marketplace
Community AMIs
Categories
All Categories
Infrastructure Software (2)
Business Software (2)
Operating System
Clear Filter
mapd
1 to 2 of 2 Products
MapD Database & Visual Analytics Platform (Enterprise Edition)
Select
(0) | MapD Enterprise Edition v3.3 Previous versions | Sold by MapD
$2.90 to $29.90/hr for software + AWS usage fees
Linux/Unix, CentOS 7.2 | 64-bit Amazon Machine Image (AMI) | Updated: 9/27/17
The MapD Core database and Immerse visual analytics platform allows you to query and visualize billions of rows in milliseconds using Amazon's GPU instances, delivering ...
More info
MapD Database & Visual Analytics Platform (Community Edition)
Select
(0) | MapD DB & Visual Analytics Platform | Sold by MapD
$0.00/hr for software + AWS usage fees
Linux/Unix, CentOS 7.2 | 64-bit Amazon Machine Image (AMI) | Updated: 9/28/17

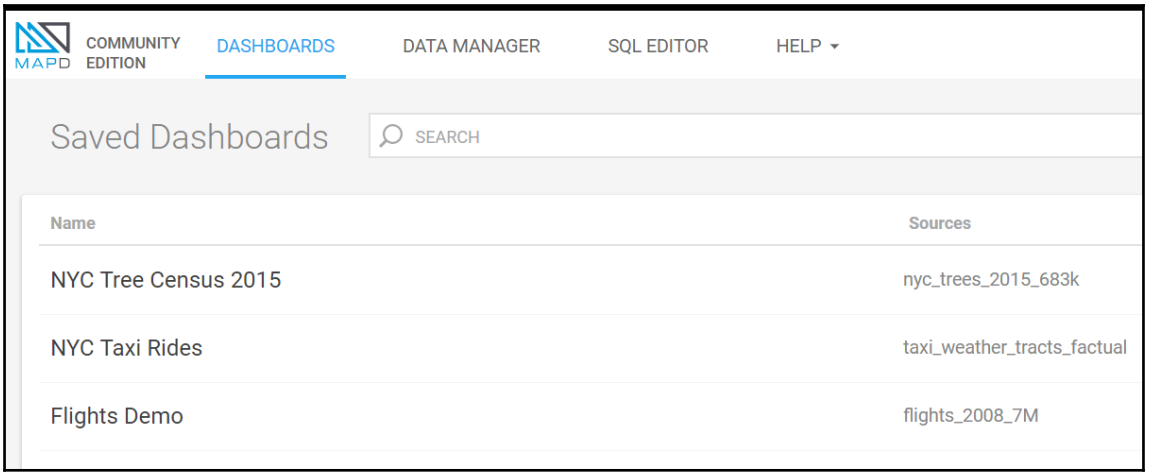

aws
Services
Resource Groups
1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add
Step 2: Choose an Instance Type
GPU instances g2.8xlarge 32
GPU compute p2.xlarge 4
GPU compute p2.8xlarge 32
GPU compute p2.16xlarge 64
GPU compute p3.2xlarge 8

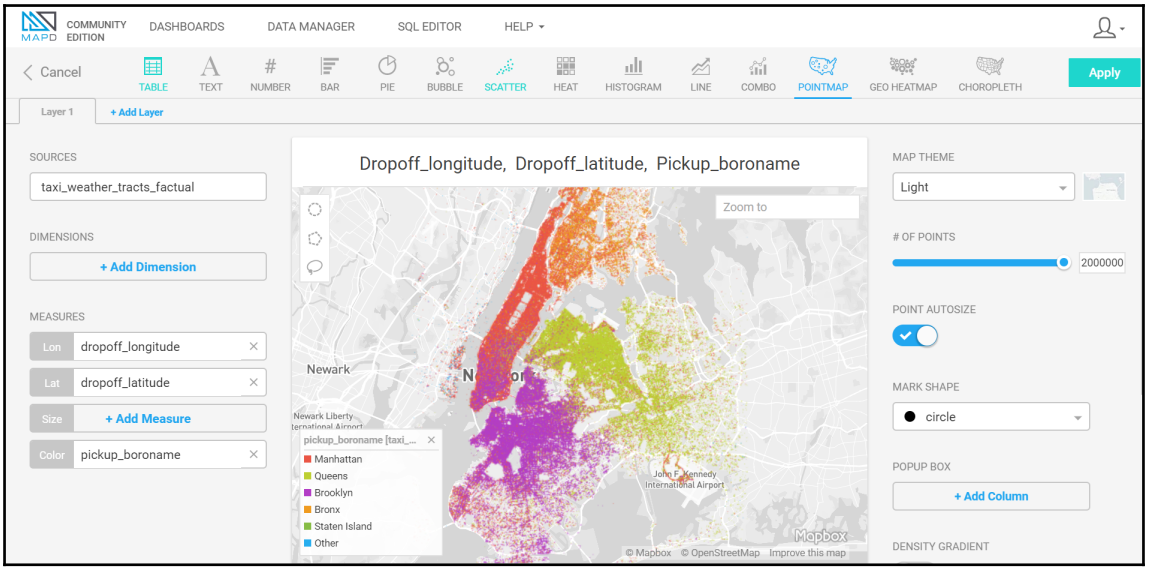

1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add Storage
5. Add Tags
6. Configure Security Group
7. Review
Step 6: Configure Security Group
A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. Learn more about Amazon EC2 security groups.
Assign a security group: Create a new security group
Select an existing security group
Security group name: MapD Database - Visual Analytics Platform -Community Edition--MapD DB - Visu
Description: This security group was generated by AWS Marketplace and is based on recomn
Type
Protocol
Port Range
Source
Description
SSH
TCP
22
Custom
0.0.0.0/0
e.g. SSH for Admin Desktop
Custom TCP F
TCP
8443
Custom
0.0.0.0/0
e.g. SSH for Admin Desktop
Custom TCP F
TCP
9091
Custom
0.0.0.0/0
e.g. SSH for Admin Desktop
Add Rule

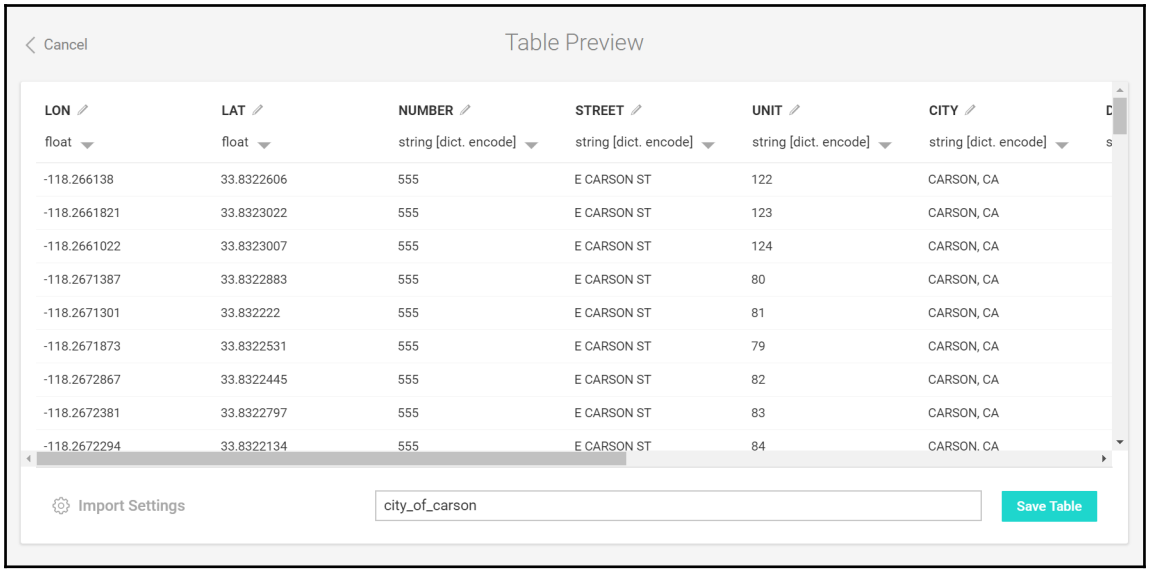

MAPD
DASHBOARDS
DATA MANAGER
SQL EDITOR
HELP
Data Manager
Import Data
TABLES
SEARCH
foobar

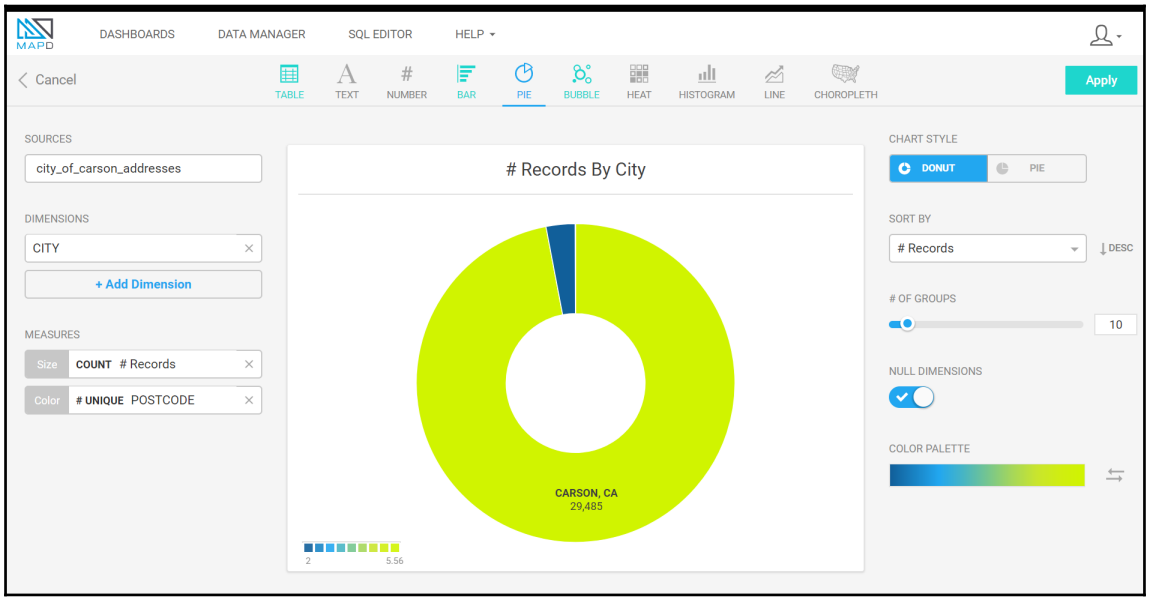

aws
Services
Resource Groups
EC2 Dashboard
Events
Tags
Reports
Limits
INSTANCES
Instances
Launch Templates
Spot Requests
Reserved Instances
Dedicated Hosts
Launch Instance
Connect
Actions
Filter by tags and attributes or search by keyword
Name
Instance ID
Instance Type
Availability Zone
i-00d864cda82e43c5e
t2.micro
us-west-2b
i-0ed5ef621e2d85ed3
p2.xlarge
us-west-2a
Instance: i-0ed5ef621e2d85ed3
Private IP: 172.31.41.133
Description
Status Checks
Monitoring
Tags
Usage Instructions
Instance ID
i-0ed5ef621e2d85ed3

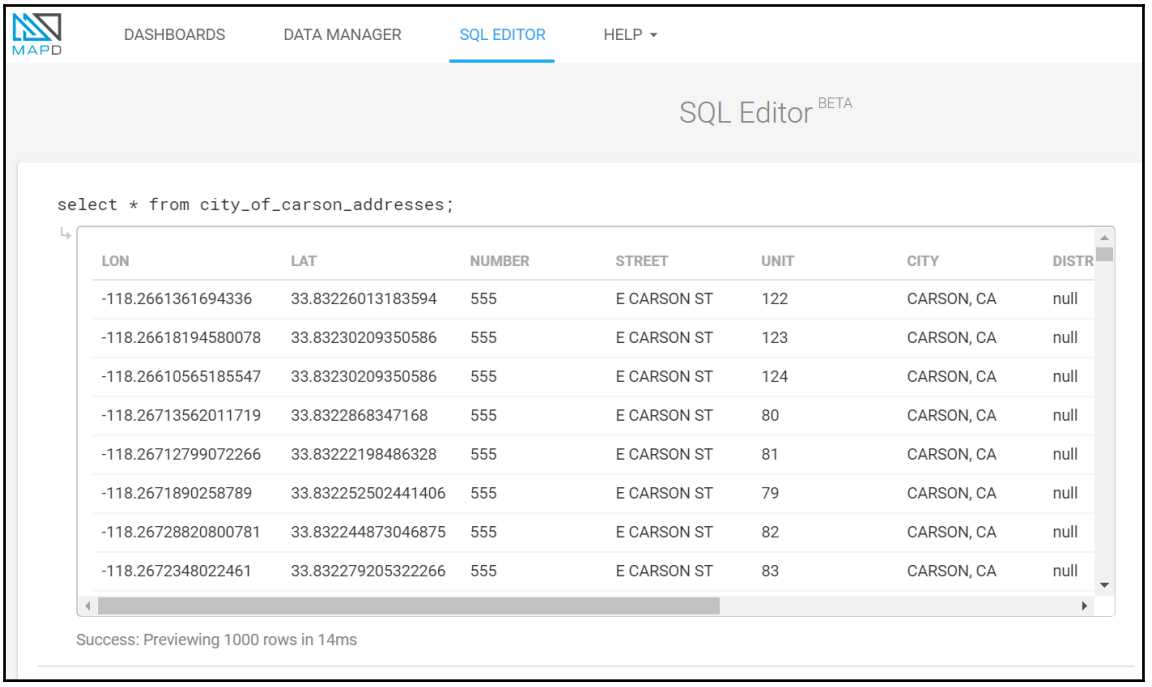

MapD Immerse
Not secure
https://ec2-54-200-213-68.us-west-2.compute.amazonaws.com:8443/#/login?_k=zzt0hj
*Please enter a password.
Login to MapD
USERNAME
mapd
PASSWORD
DATABASE
mapd
ADVANCED SETTINGS
CONNECT

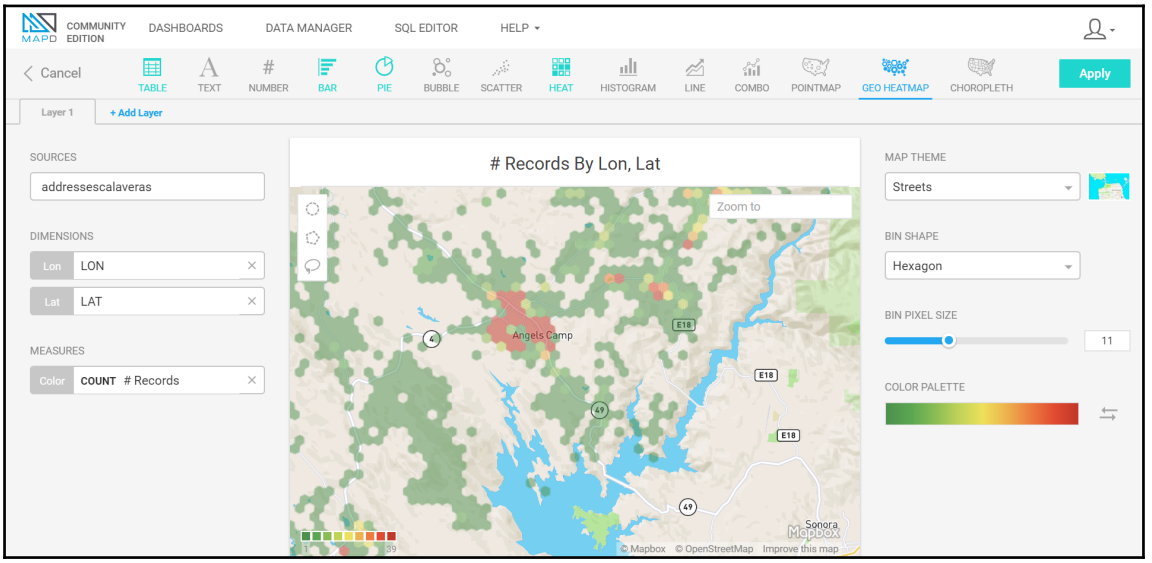

COMMUNITY EDITION
DASHBOARDS
DATA MANAGER
SQL EDITOR
HELP
Saved Dashboards
SEARCH
Name
Sources
NYC Tree Census 2015
nyc_trees_2015_683k
NYC Taxi Rides
taxi_weather_tracts_factual
Flights Demo
flights_2008_7M

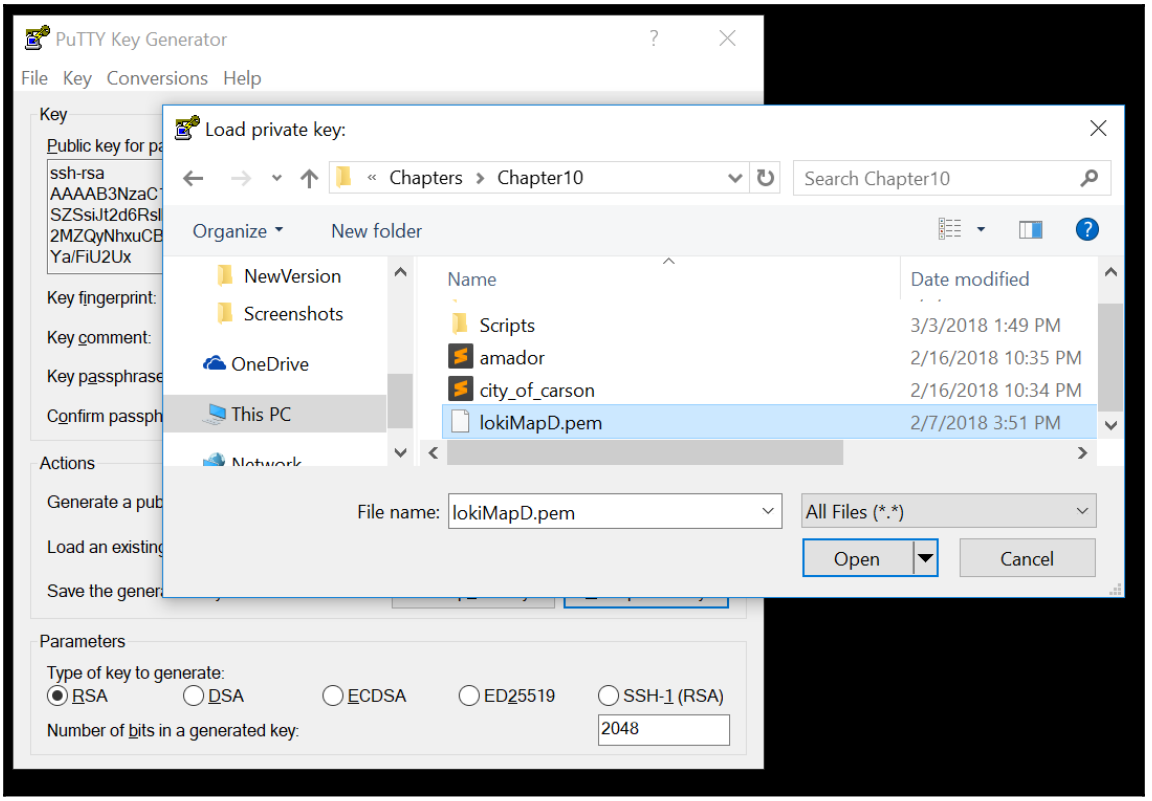

COMMUNITY EDITION
DASHBOARDS
DATA MANAGER
SQL EDITOR
HELP
Cancel
TABLE
TEXT
NUMBER
BAR
PIE
BUBBLE
SCATTER
HEAT
HISTOGRAM
LINE
COMBO
POINTMAP
GEO HEATMAP
CHOROPLETH
Apply
Layer 1
+ Add Layer
SOURCES
taxi_weather_tracts_factual
DIMENSIONS
+ Add Dimension
MEASURES
Lon
dropoff_longitude
Lat
dropoff_latitude
Size
+ Add Measure
Color
pickup_boroname
Dropoff_longitude, Dropoff_latitude, Pickup_boroname
Zoom to
Newark
pickup_boroname [taxi_...
Manhattan
Queens
Brooklyn
Bronx
Staten Island
Other
© Mapbox © OpenStreetMap Improve this map
MAP THEME
Light
OF POINTS
2000000
POINT AUTOSIZE
MARK SHAPE
circle
POPUP BOX
+ Add Column
DENSITY GRADIENT

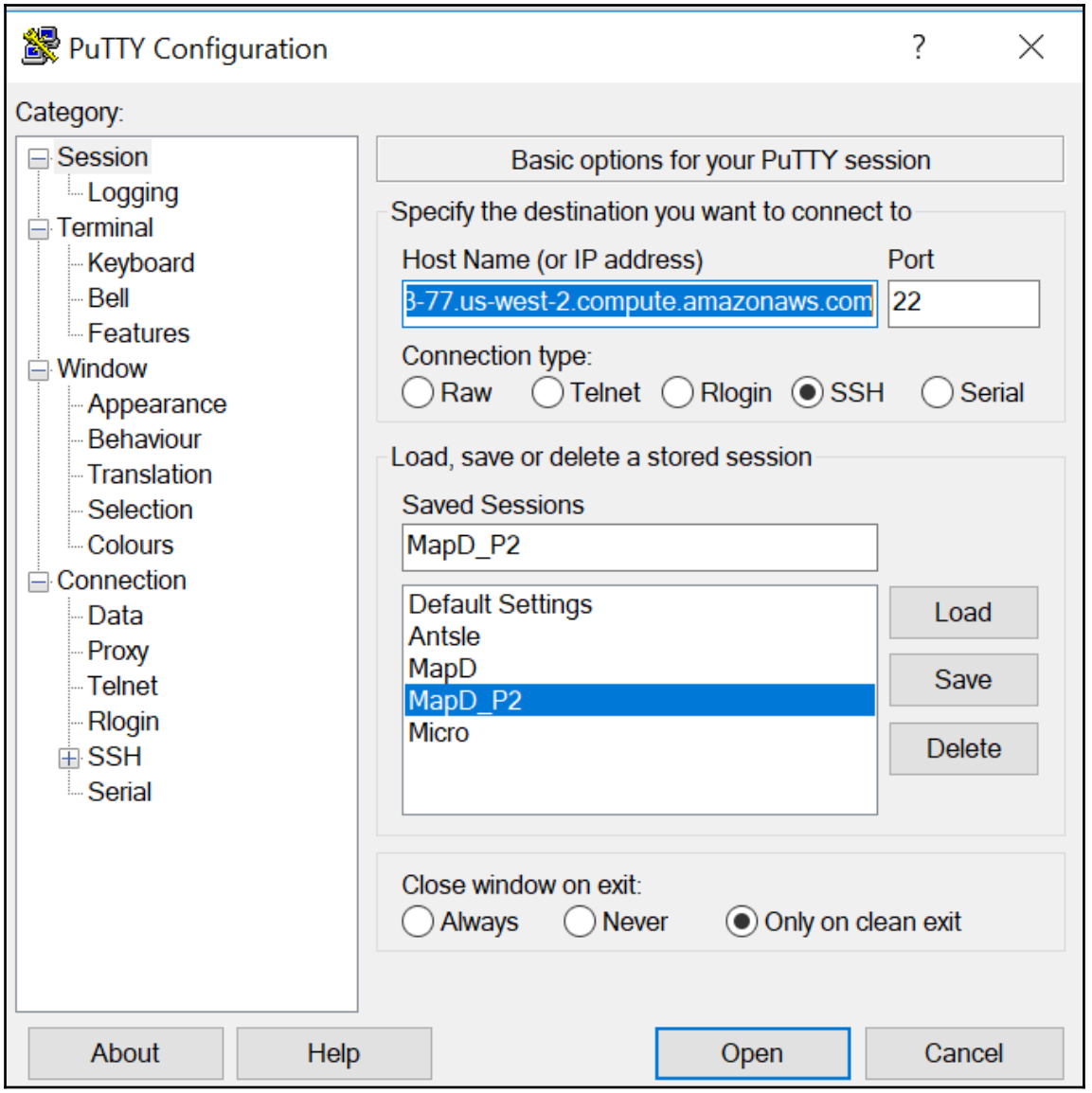

Cancel
Table Preview
LON
float
LAT
float
NUMBER
string [dict. encode]
STREET
string [dict. encode]
UNIT
string [dict. encode]
CITY
string [dict. encode]
-118.266138 33.8322606 555 E CARSON ST 122 CARSON, CA
-118.2661821 33.8323022 555 E CARSON ST 123 CARSON, CA
-118.2661022 33.8323007 555 E CARSON ST 124 CARSON, CA
-118.2671387 33.8322883 555 E CARSON ST 80 CARSON, CA
-118.2671301 33.832222 555 E CARSON ST 81 CARSON, CA
-118.2671873 33.8322531 555 E CARSON ST 79 CARSON, CA
-118.2672867 33.8322445 555 E CARSON ST 82 CARSON, CA
-118.2672381 33.8322797 555 E CARSON ST 83 CARSON, CA
-118.2672294 33.8322134 555 E CARSON ST 84 CARSON, CA
Import Settings
city_of_carson
Save Table

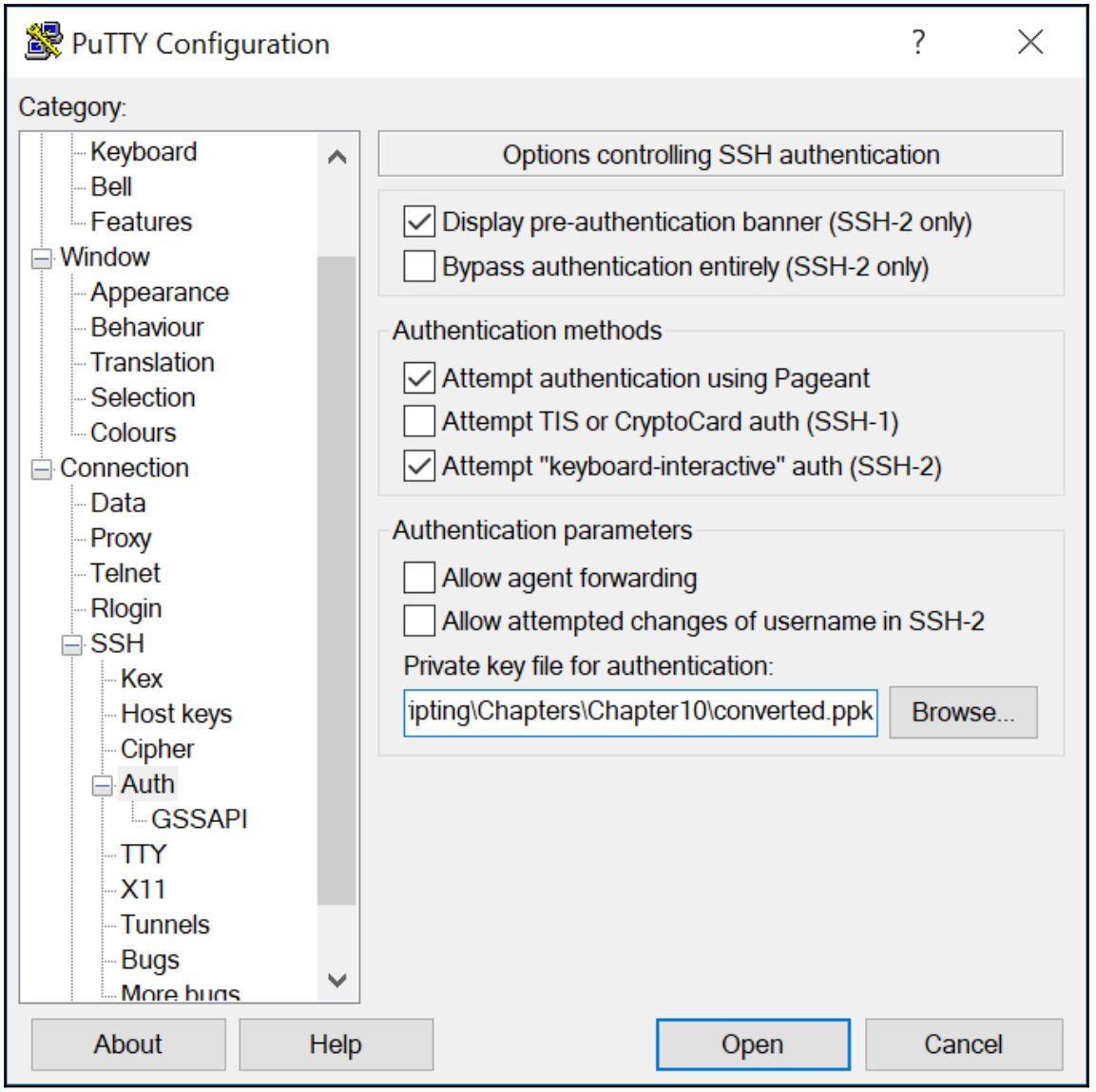

MAPD
DASHBOARDS
DATA MANAGER
SQL EDITOR
HELP
Cancel
TABLE
TEXT
NUMBER
BAR
PIE
BUBBLE
HEAT
HISTOGRAM
LINE
CHOROPLETH
Apply
SOURCES
city_of_carson_addresses
DIMENSIONS
CITY
+ Add Dimension
MEASURES
Size COUNT # Records
Color # UNIQUE POSTCODE
Records By City
CARSON, CA
29,485
2
5.56
CHART STYLE
DONUT
PIE
SORT BY
Records
DESC
OF GROUPS
10
NULL DIMENSIONS
COLOR PALETTE


MAPD
DASHBOARDS
DATA MANAGER
SQL EDITOR
HELP
SQL Editor BETA
select * from city_of_carson_addresses;
LON LAT NUMBER STREET UNIT CITY DISTR
-118.2661361694336 33.83226013183594 555 E CARSON ST 122 CARSON, CA null
-118.26618194580078 33.83230209350586 555 E CARSON ST 123 CARSON, CA null
-118.26610565185547 33.83230209350586 555 E CARSON ST 124 CARSON, CA null
-118.26713562011719 33.8322868347168 555 E CARSON ST 80 CARSON, CA null
-118.26712799072266 33.83222198486328 555 E CARSON ST 81 CARSON, CA null
-118.2671890258789 33.832252502441406 555 E CARSON ST 79 CARSON, CA null
-118.26728820800781 33.832244873046875 555 E CARSON ST 82 CARSON, CA null
-118.2672348022461 33.832279205322266 555 E CARSON ST 83 CARSON, CA null
Success: Previewing 1000 rows in 14ms


MAPD COMMUNITY EDITION
DASHBOARDS
DATA MANAGER
SQL EDITOR
HELP
Cancel
TABLE TEXT NUMBER BAR PIE BUBBLE SCATTER HEAT HISTOGRAM LINE COMBO POINTMAP GEO HEATMAP CHOROPLETH
Apply
Layer 1
+ Add Layer
SOURCES
addressescalaveras
DIMENSIONS
Lon LON
Lat LAT
MEASURES
Color COUNT # Records
Records By Lon, Lat
Zoom to
Angels Camp
MAP THEME
Streets
BIN SHAPE
Hexagon
BIN PIXEL SIZE
11
COLOR PALETTE
© Mapbox © OpenStreetMap Improve this map


PuTTY Key Generator
File Key Conversions Help
Key
Public key for pa
ssh-rsa
AAAAB3NzaC
SZSsiJt2d6Rsl
2MZQyNhxuCB
Ya/FiU2Ux
Key fingerprint:
Key comment:
Key passphrase
Confirm passph
Actions
Generate a pub
Load an existing
Save the gener
Parameters
Type of key to generate:
RSA
DSA
ECDSA
ED25519
SSH-1 (RSA)
Number of bits in a generated key:
2048
Load private key:
Chapters › Chapter10
Search Chapter10
Organize
New folder
NewVersion
Screenshots
OneDrive
This PC
Name
Date modified
Scripts
3/3/2018 1:49 PM
amador
2/16/2018 10:35 PM
city_of_carson
2/16/2018 10:34 PM
lokiMapD.pem
2/7/2018 3:51 PM
File name:
lokiMapD.pem
All Files (*.*)
Open
Cancel


PuTTY Configuration
Category:
Session
Logging
Terminal
Keyboard
Bell
Features
Window
Appearance
Behaviour
Translation
Selection
Colours
Connection
Data
Proxy
Telnet
Rlogin
SSH
Serial
Basic options for your PuTTY session
Specify the destination you want to connect to
Host Name (or IP address)
Port
3-77.us-west-2.compute.amazonaws.com
22
Connection type:
Raw
Telnet
Rlogin
SSH
Serial
Load, save or delete a stored session
Saved Sessions
MapD_P2
Default Settings
Antsle
MapD
MapD_P2
Micro
Load
Save
Delete
Close window on exit:
Always
Never
Only on clean exit
About
Help
Open
Cancel


PuTTY Configuration
Category:
Keyboard
Bell
Features
Window
Appearance
Behaviour
Translation
Selection
Colours
Connection
Data
Proxy
Telnet
Rlogin
SSH
Kex
Host keys
Cipher
Auth
GSSAPI
TTY
X11
Tunnels
Bugs
More bugs
Options controlling SSH authentication
Display pre-authentication banner (SSH-2 only)
Bypass authentication entirely (SSH-2 only)
Authentication methods
Attempt authentication using Pageant
Attempt TIS or CryptoCard auth (SSH-1)
Attempt "keyboard-interactive" auth (SSH-2)
Authentication parameters
Allow agent forwarding
Allow attempted changes of username in SSH-2
Private key file for authentication:
ipting\Chapters\Chapter10\converted.ppk
Browse...
About
Help
Open
Cancel

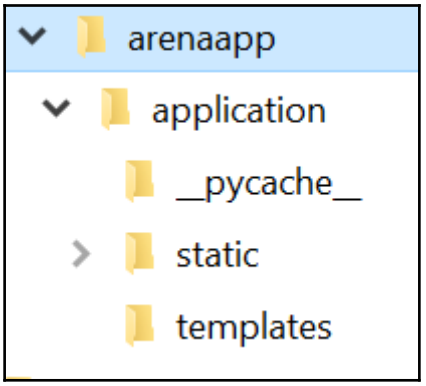
```
C:\Users\admin>pip install pymapd
Collecting pymapd
  Downloading pymapd-0.3.2.tar.gz (73kB)
    100% |████████████████████████████████| 81kB 706kB/s
Requirement already satisfied: six in c:\users\admin\appdata\local\programs\python\python36\lib\site-packages (from pymapd)
Requirement already satisfied: thrift==0.10.0 in c:\users\admin\appdata\local\programs\python\python36\lib\site-packages (from pymapd)
Requirement already satisfied: sqlalchemy in c:\users\admin\appdata\local\programs\python\python36\lib\site-packages (from pymapd)
Building wheels for collected packages: pymapd
  Running setup.py bdist_wheel for pymapd ... done
  Stored in directory: C:\Users\admin\AppData\Local\pip\Cache\wheels\07\1c\fa\d3b3a0059a53d74da5f891fa0b39f93ee43fa4131f1695289b
Successfully built pymapd
Installing collected packages: pymapd
Successfully installed pymapd-0.3.2
```

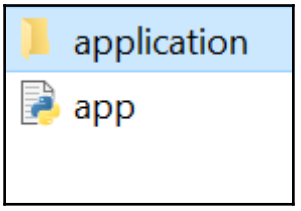
```
C:\Packt\PythonScripting\Chapters\Chapter10\Scripts>python Chapter10_4.py
1520266202.7939787
1520266202.8661702
('Okeechobee',)
('Okeechobee',)
1520266202.8661702
```

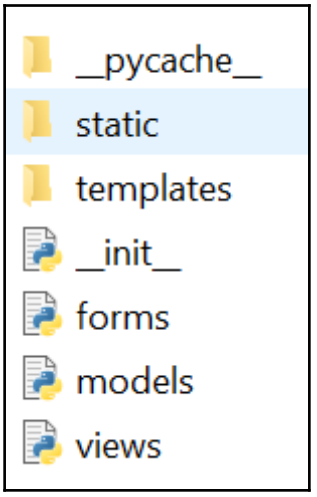
Chapter 11: Flask and GeoAlchemy2

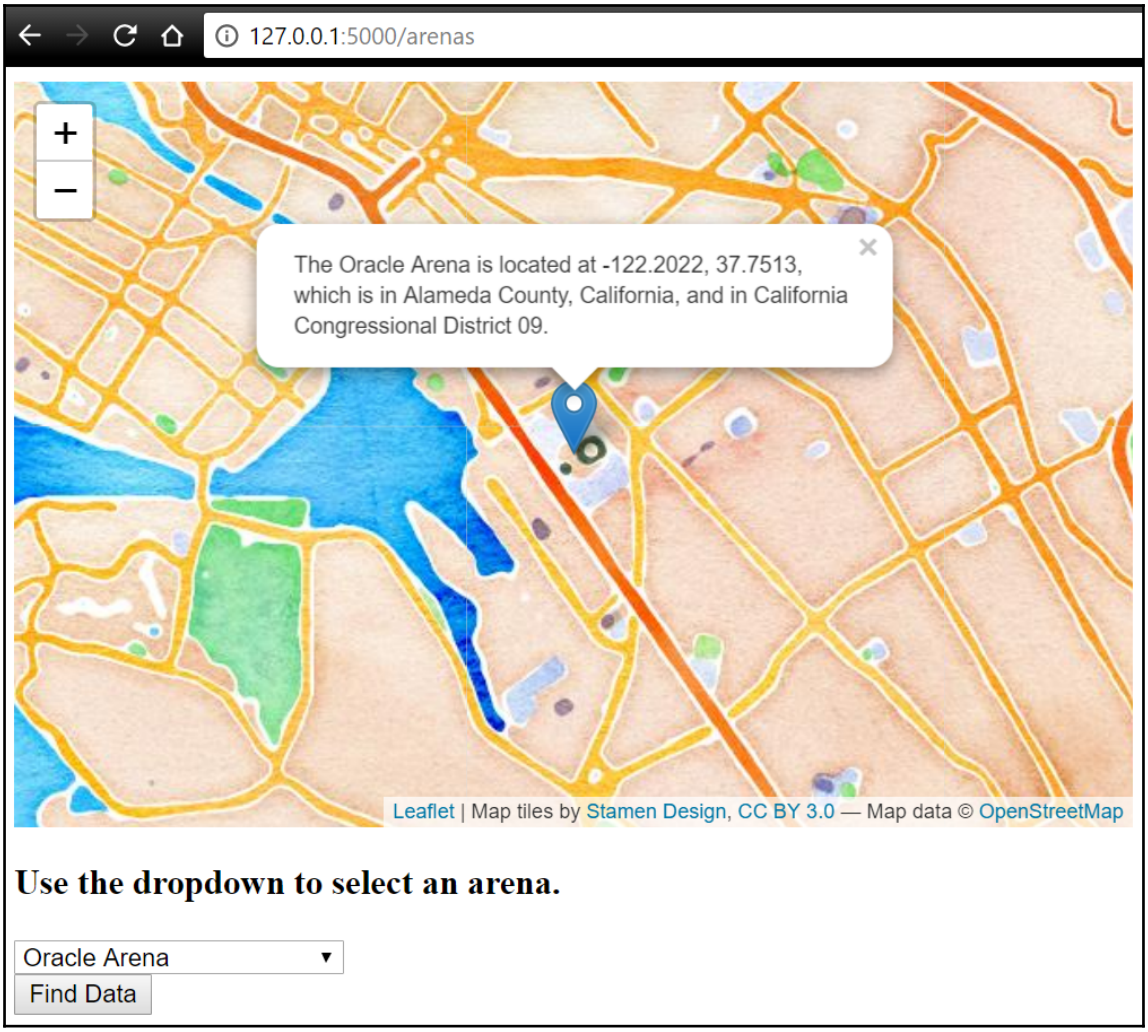
```
C:\Users\admin\AppData\Local\Programs\Python\Python36\Scripts>pip install flask
Collecting flask
  Using cached Flask-0.12.2-py2.py3-none-any.whl
Collecting itsdangerous>=0.21 (from flask)
  Using cached itsdangerous-0.24.tar.gz
Collecting Werkzeug>=0.7 (from flask)
  Using cached Werkzeug-0.12.2-py2.py3-none-any.whl
Collecting Jinja2>=2.4 (from flask)
  Using cached Jinja2-2.9.6-py2.py3-none-any.whl
Collecting click>=2.0 (from flask)
  Using cached click-6.7-py2.py3-none-any.whl
Collecting MarkupSafe>=0.23 (from Jinja2>=2.4->flask)
  Using cached MarkupSafe-1.0.tar.gz
Installing collected packages: itsdangerous, Werkzeug, MarkupSafe, Jinja2, click, flask
  Running setup.py install for itsdangerous ... done
  Running setup.py install for MarkupSafe ... done
Successfully installed Jinja2-2.9.6 MarkupSafe-1.0 Werkzeug-0.12.2 click-6.7 flask-0.12.2 itsdangerous-0.24
```

```
C:\Users\admin\AppData\Local\Programs\Python\Python36\Scripts>pip install flask-sqlalchemy
Collecting flask-sqlalchemy
  Downloading Flask_SQLAlchemy-2.3.2-py2.py3-none-any.whl
Requirement already satisfied: SQLAlchemy>=0.8.0 in c:\users\admin\appdata\local\programs\python\python36\lib\site-packa
ges (from flask-sqlalchemy)
Requirement already satisfied: Flask>=0.10 in c:\users\admin\appdata\local\programs\python\python36\lib\site-packages (f
rom flask-sqlalchemy)
Requirement already satisfied: Jinja2>=2.4 in c:\users\admin\appdata\local\programs\python\python36\lib\site-packages (f
rom Flask>=0.10->flask-sqlalchemy)
Requirement already satisfied: itsdangerous>=0.21 in c:\users\admin\appdata\local\programs\python\python36\lib\site-pack
ages (from Flask>=0.10->flask-sqlalchemy)
Requirement already satisfied: Werkzeug>=0.7 in c:\users\admin\appdata\local\programs\python\python36\lib\site-packages
(from Flask>=0.10->flask-sqlalchemy)
Requirement already satisfied: click>=2.0 in c:\users\admin\appdata\local\programs\python\python36\lib\site-packages (fr
om Flask>=0.10->flask-sqlalchemy)
Requirement already satisfied: MarkupSafe>=0.23 in c:\users\admin\appdata\local\programs\python\python36\lib\site-packag
es (from Jinja2>=2.4->Flask>=0.10->flask-sqlalchemy)
Installing collected packages: flask-sqlalchemy
Successfully installed flask-sqlalchemy-2.3.2
```


arenaapp
application
__pycache__
static
templates

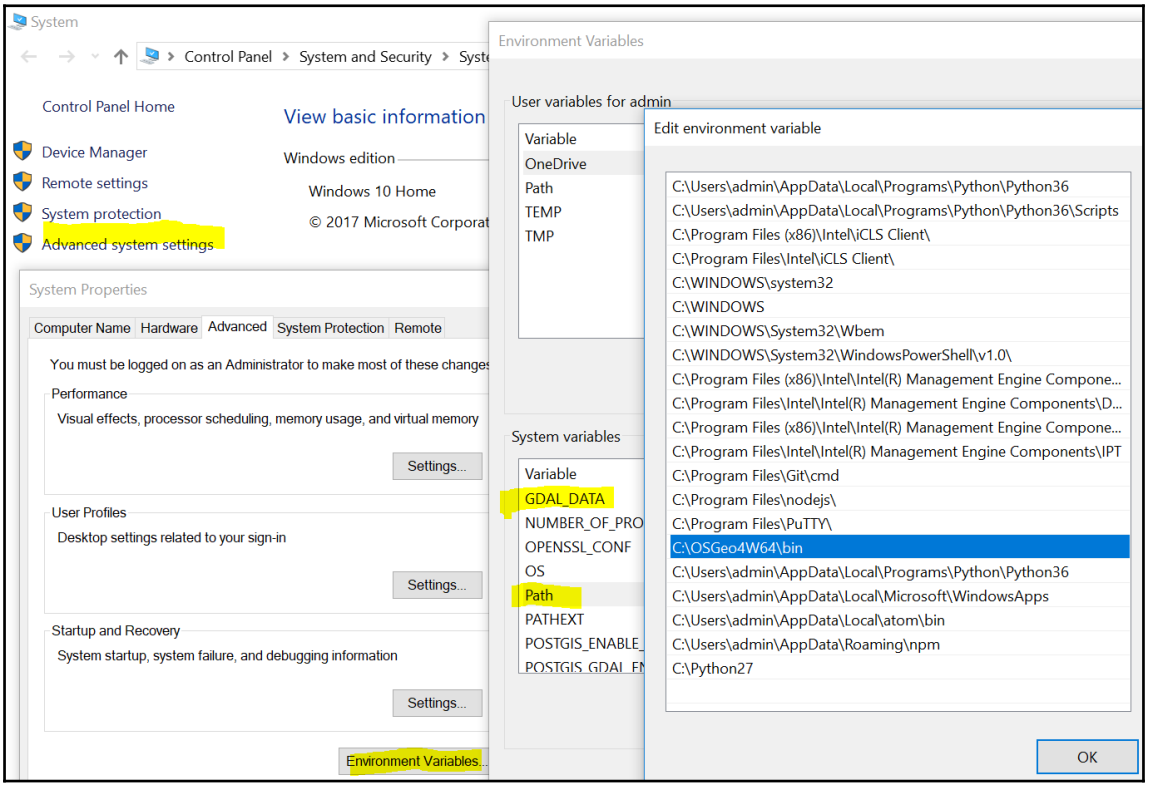

application
app

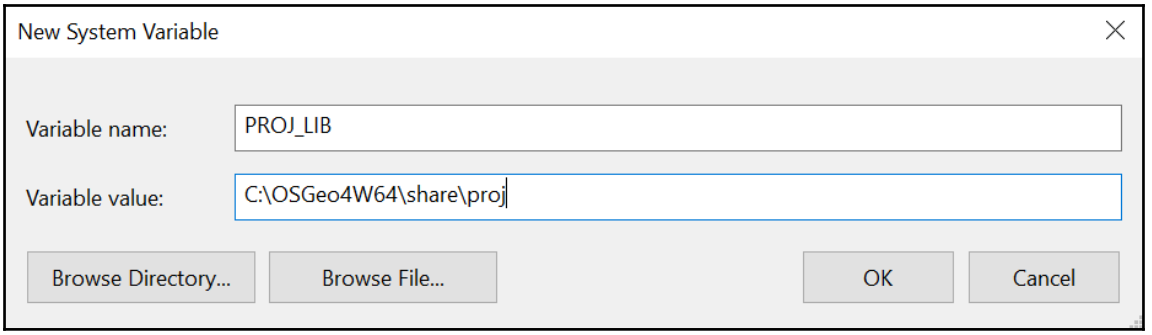

__pycache__
static
templates
__init__
forms
models
views

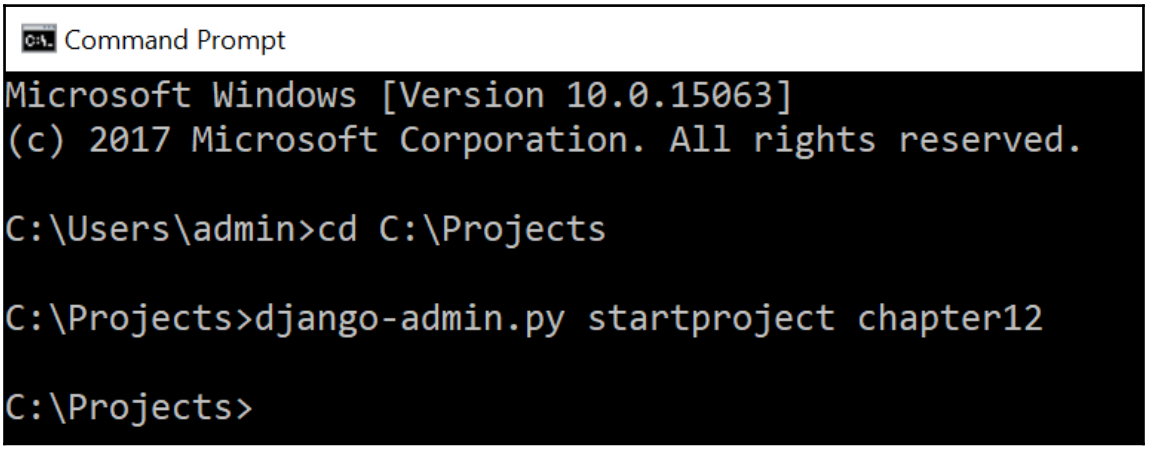

127.0.0.1:5000/arenas
+
−
The Oracle Arena is located at -122.2022, 37.7513, which is in Alameda County, California, and in California Congressional District 09.
Leaflet | Map tiles by Stamen Design, CC BY 3.0 — Map data © OpenStreetMap
Use the dropdown to select an arena.
Oracle Arena
Find Data

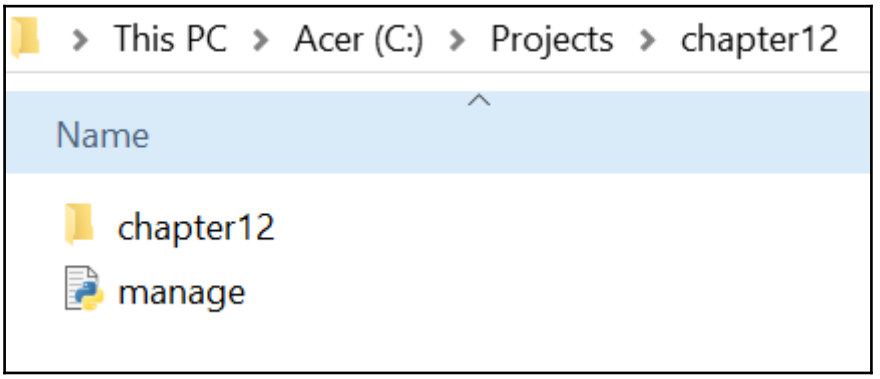
Chapter 12: GeoDjango

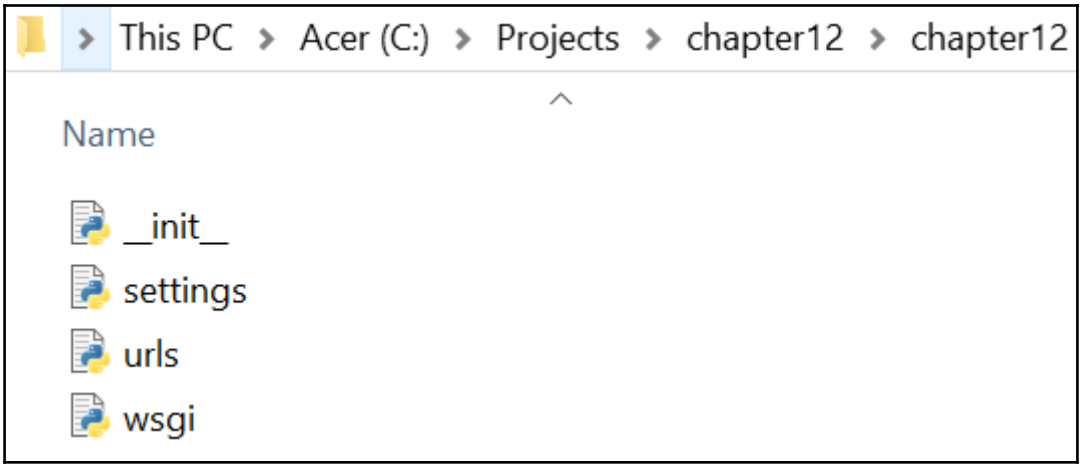
```
Collecting Django==2.0
  Downloading Django-2.0-py3-none-any.whl (7.1MB)
    100% |████████████████████████████████| 7.1MB 173kB/s
Collecting pytz (from Django==2.0)
  Using cached pytz-2017.3-py2.py3-none-any.whl
Installing collected packages: pytz, Django
Successfully installed Django-2.0 pytz-2017.3
```



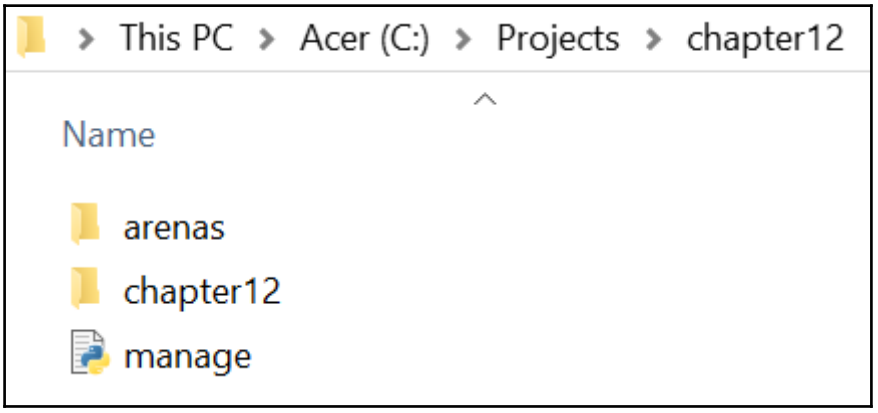

New System Variable
Variable name:
PROJ_LIB
Variable value:
C:\OSGeo4W64\share\proj
Browse Directory...
Browse File...
OK
Cancel

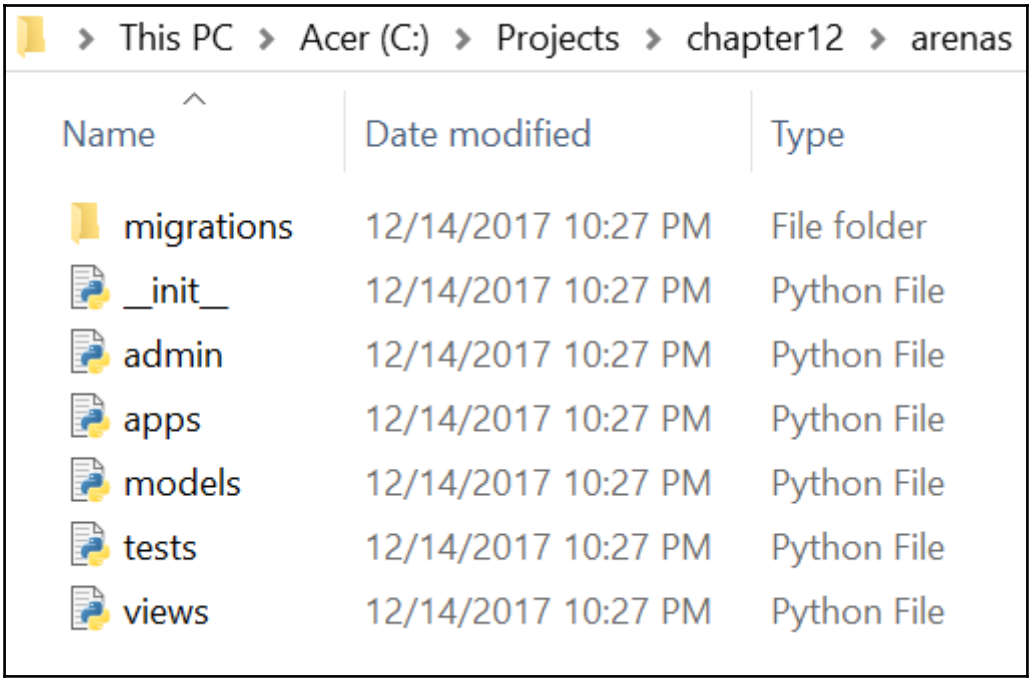

Command Prompt
Microsoft Windows [Version 10.0.15063]
(c) 2017 Microsoft Corporation. All rights reserved.
C:\Users\admin>cd C:\Projects
C:\Projects>django-admin.py startproject chapter12
C:\Projects>


This PC
Acer (C:)
Projects
chapter12
Name
chapter12
manage

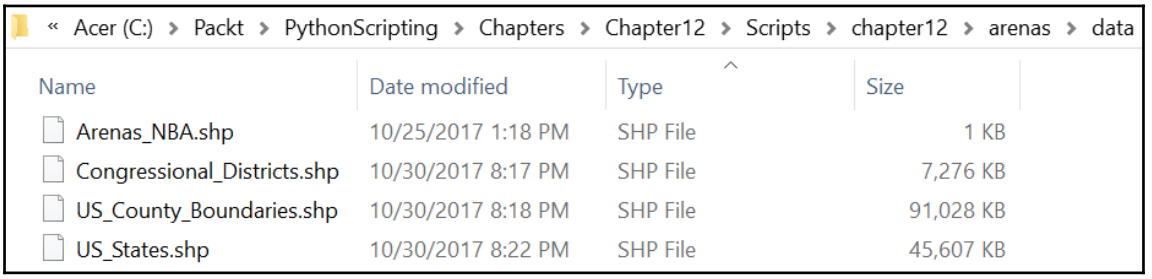



```
Command Prompt
Microsoft Windows [Version 10.0.15063]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\admin>cd C:\Projects\chapter12

C:\Projects\chapter12>python manage.py startapp arenas

C:\Projects\chapter12>
```






```
C:\Projects\chapter12>python manage.py shell
Python 3.6.3 (v3.6.3:2c5fed8, Oct  3 2017, 18:11:49) [MSC v.1900 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
(InteractiveConsole)
>>>
```



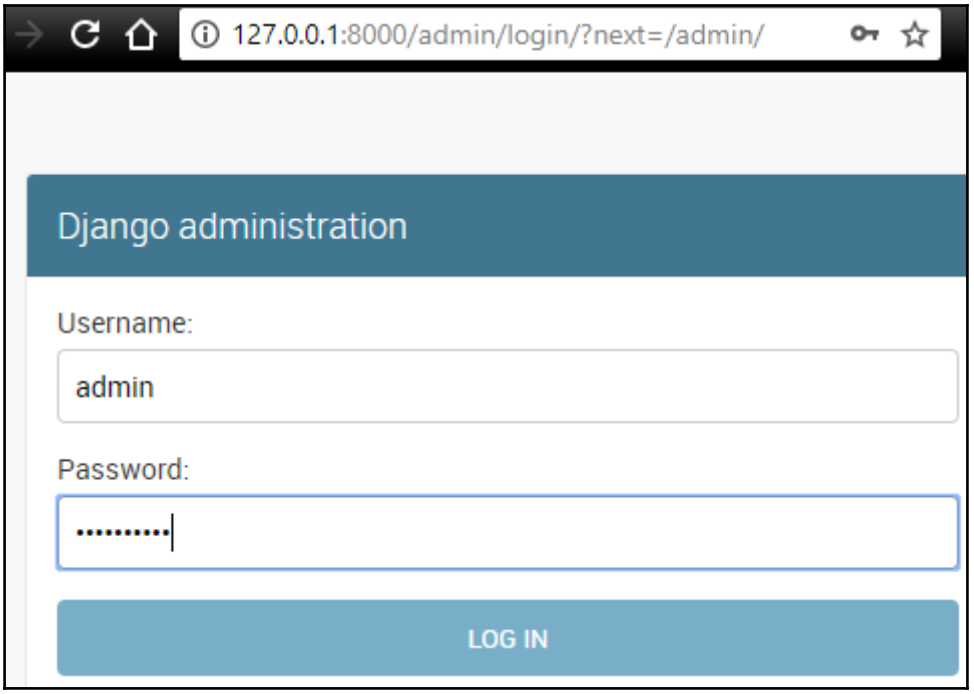
```
C:\Projects\chapter12>python manage.py ogrinspect arenas\data\Arenas_NBA.shp Arenas --srid=4326 --mapping
# This is an auto-generated Django model module created by ogrinspect.
from django.contrib.gis.db import models


class Arenas(models.Model):
    sector = models.CharField(max_length=30)
    subsector = models.CharField(max_length=22)
    primary_ty = models.CharField(max_length=45)
    date_creat = models.CharField(max_length=15)
    date_modif = models.CharField(max_length=24)
    comp_affil = models.CharField(max_length=29)
    name1 = models.CharField(max_length=66)
```

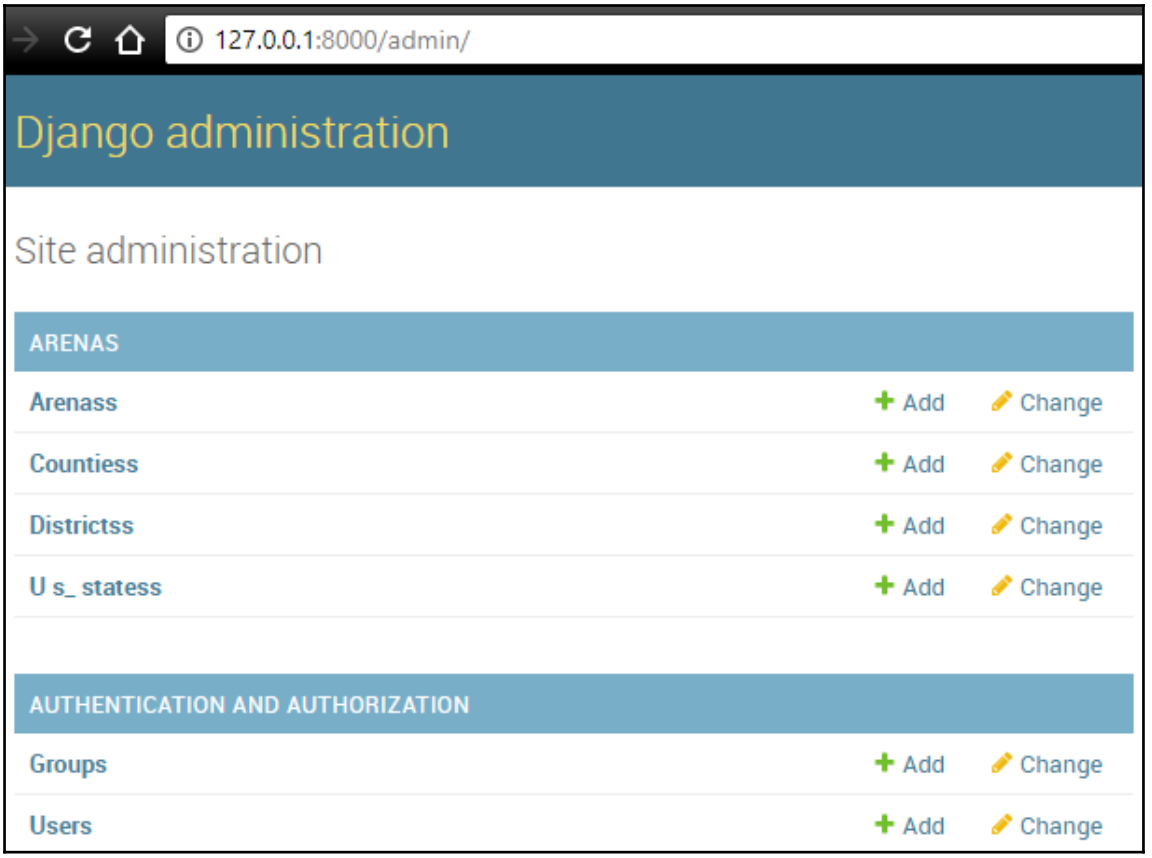
```
C:\Projects\chapter12>python manage.py sqlmigrate arenas 0001
BEGIN;
--
-- Create model Arenas
--
CREATE TABLE "arenas_arenas" ("id" serial NOT NULL PRIMARY KEY, "sect
or" varchar(30) NOT NULL, "subsector" varchar(22) NOT NULL, "primary_
ty" varchar(45) NOT NULL, "date_creat" varchar(15) NOT NULL, "date_mo
```

```
Operations to perform:
  Apply all migrations: admin, arenas, auth, contenttypes, sessions
Running migrations:
  Applying contenttypes.0001_initial... OK
  Applying auth.0001_initial... OK
  Applying admin.0001_initial... OK
  Applying admin.0002_logentry_remove_auto_add... OK
  Applying arenas.0001_initial... OK
  Applying contenttypes.0002_remove_content_type_name... OK
  Applying auth.0002_alter_permission_name_max_length... OK
  Applying auth.0003_alter_user_email_max_length... OK
  Applying auth.0004_alter_user_username_opts... OK
  Applying auth.0005_alter_user_last_login_null... OK
  Applying auth.0006_require_contenttypes_0002... OK
  Applying auth.0007_alter_validators_add_error_messages... OK
  Applying auth.0008_alter_user_username_max_length... OK
  Applying auth.0009_alter_user_last_name_max_length... OK
  Applying sessions.0001_initial... OK
```

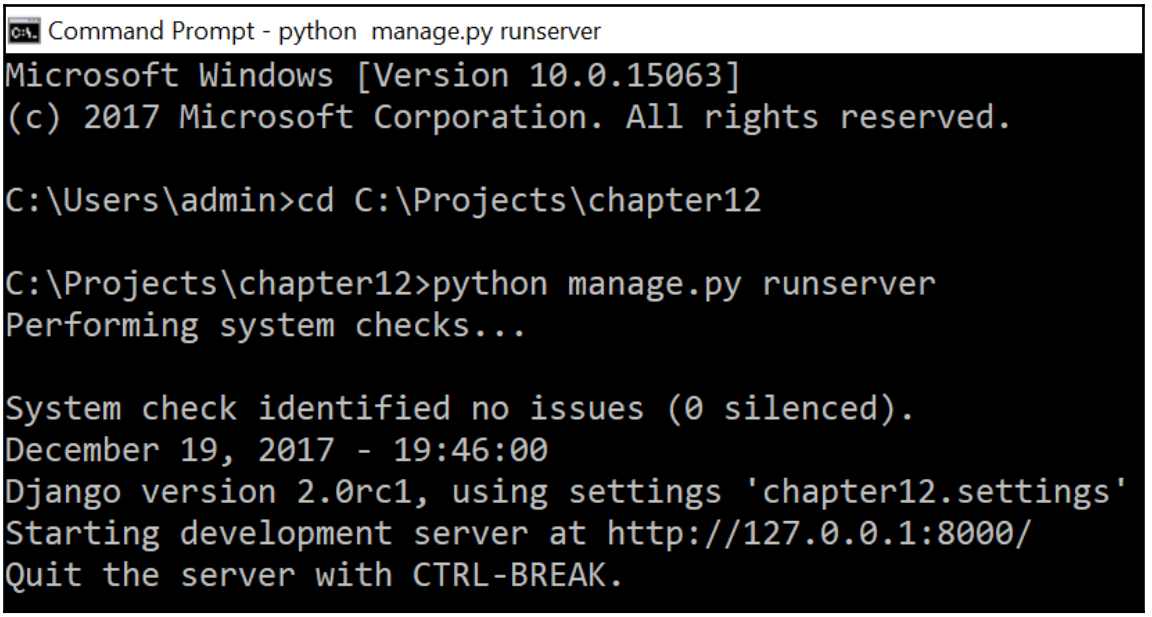
```
C:\Projects\chapter12>python manage.py shell
Python 3.6.3 (v3.6.3:2c5fed8, Oct  3 2017, 18:11:49) [MSC v.1900 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
(InteractiveConsole)
>>> from arenas import load
>>> load.run()
Saved: US_States object (1)
Saved: US_States object (2)
Saved: US_States object (3)
Saved: US_States object (4)
Saved: US_States object (5)
```

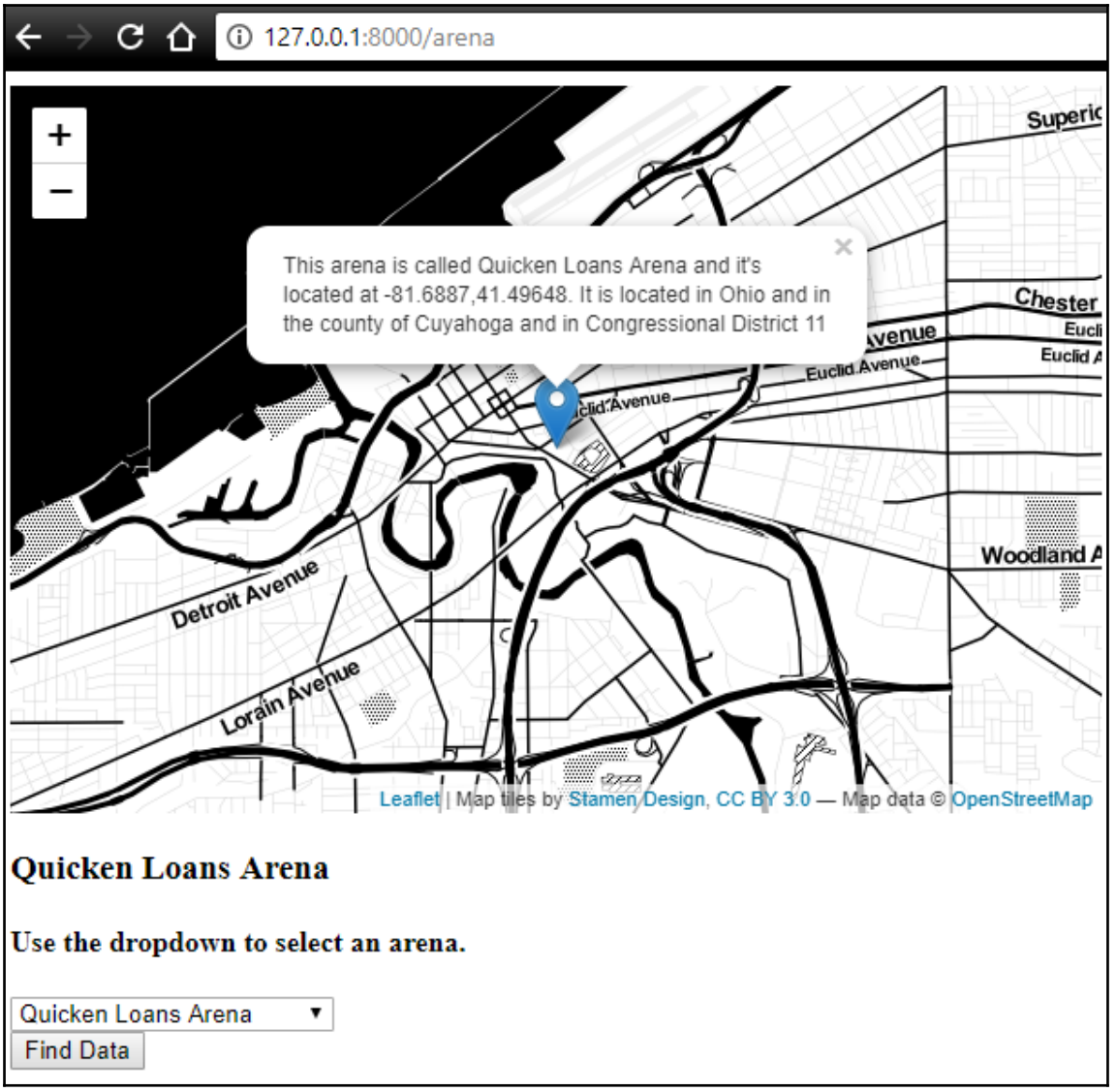
```
C:\Projects\chapter12>python manage.py runserver
Performing system checks...

System check identified no issues (0 silenced).
December 19, 2017 - 13:01:24
Django version 2.0rc1, using settings 'chapter12.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```


127.0.0.1:8000/admin/login/?next=/admin/
Django administration
Username:
admin
Password:
LOG IN

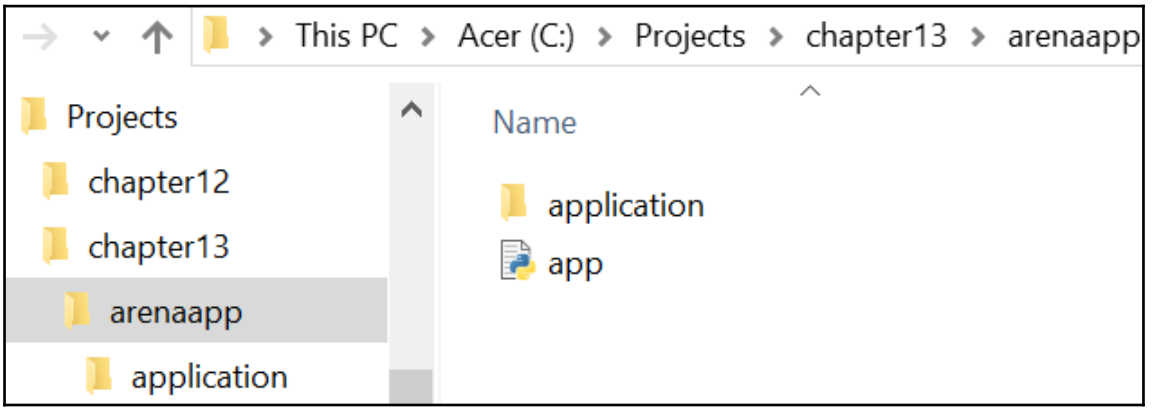

127.0.0.1:8000/admin/
Django administration
Site administration
ARENAS
Arenass
Add
Change
Countiess
Add
Change
Districtss
Add
Change
U s_ statess
Add
Change
AUTHENTICATION AND AUTHORIZATION
Groups
Add
Change
Users
Add
Change

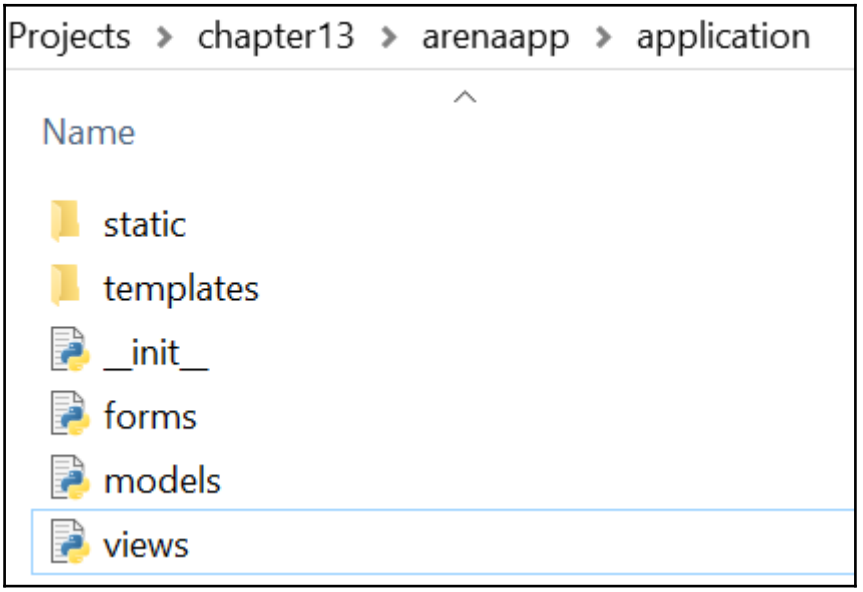
State:	PR
Stfips:	72
Version:	01
Shape leng:	6.61263978632
Shape area:	0.763675145537
Geom:	


Command Prompt - python manage.py runserver
Microsoft Windows [Version 10.0.15063]
(c) 2017 Microsoft Corporation. All rights reserved.
C:\Users\admin>cd C:\Projects\chapter12
C:\Projects\chapter12>python manage.py runserver
Performing system checks...
System check identified no issues (0 silenced).
December 19, 2017 - 19:46:00
Django version 2.0rc1, using settings 'chapter12.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.

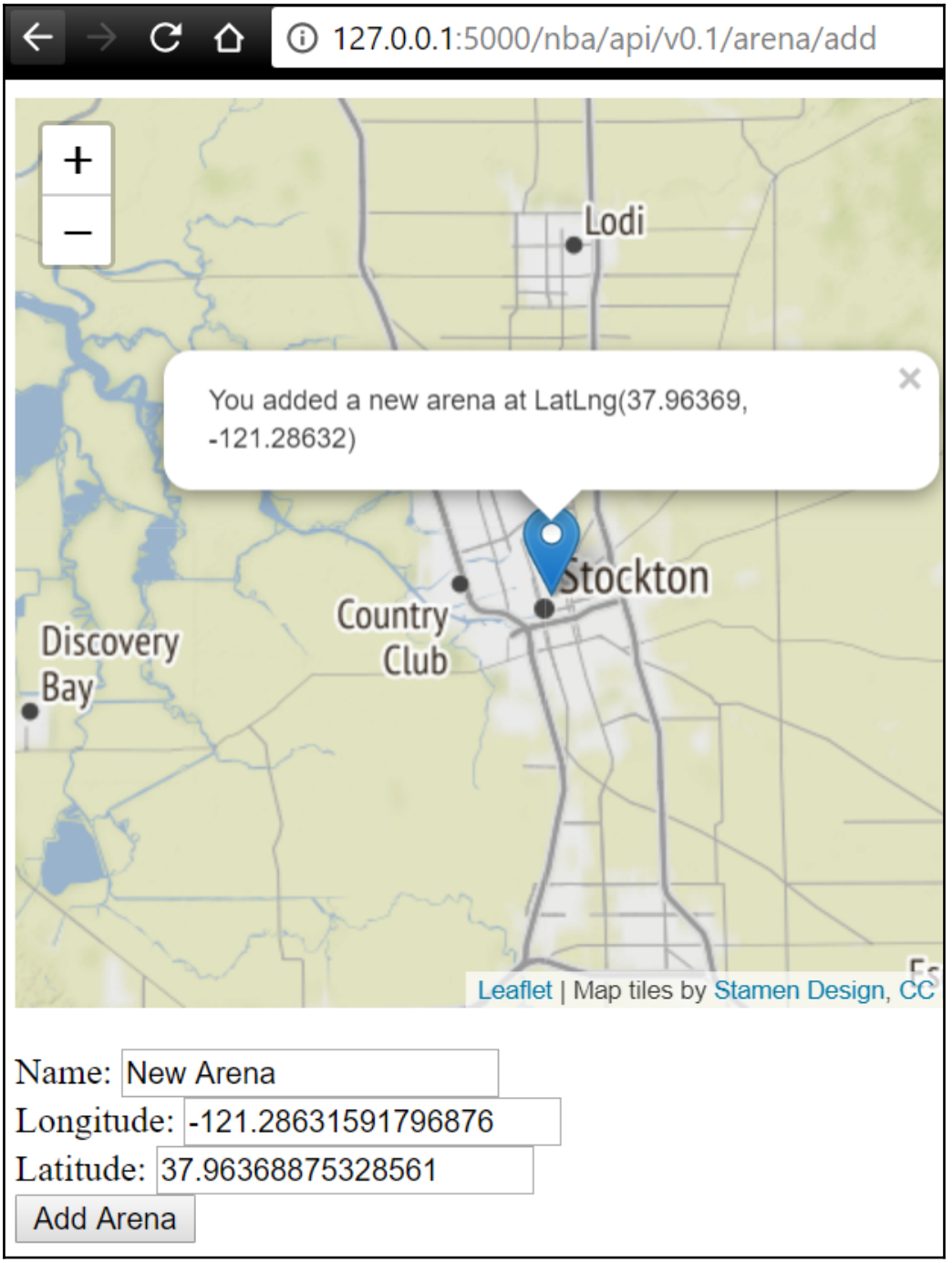

127.0.0.1:8000/arena
This arena is called Quicken Loans Arena and it's located at -81.6887,41.49648. It is located in Ohio and in the county of Cuyahoga and in Congressional District 11
Euclid Avenue
Detroit Avenue
Lorain Avenue
Chester
Woodland
Leaflet | Map tiles by Stamen Design, CC BY 3.0 — Map data © OpenStreetMap
Quicken Loans Arena
Use the dropdown to select an arena.
Quicken Loans Arena
Find Data

Chapter 13: Geospatial REST API



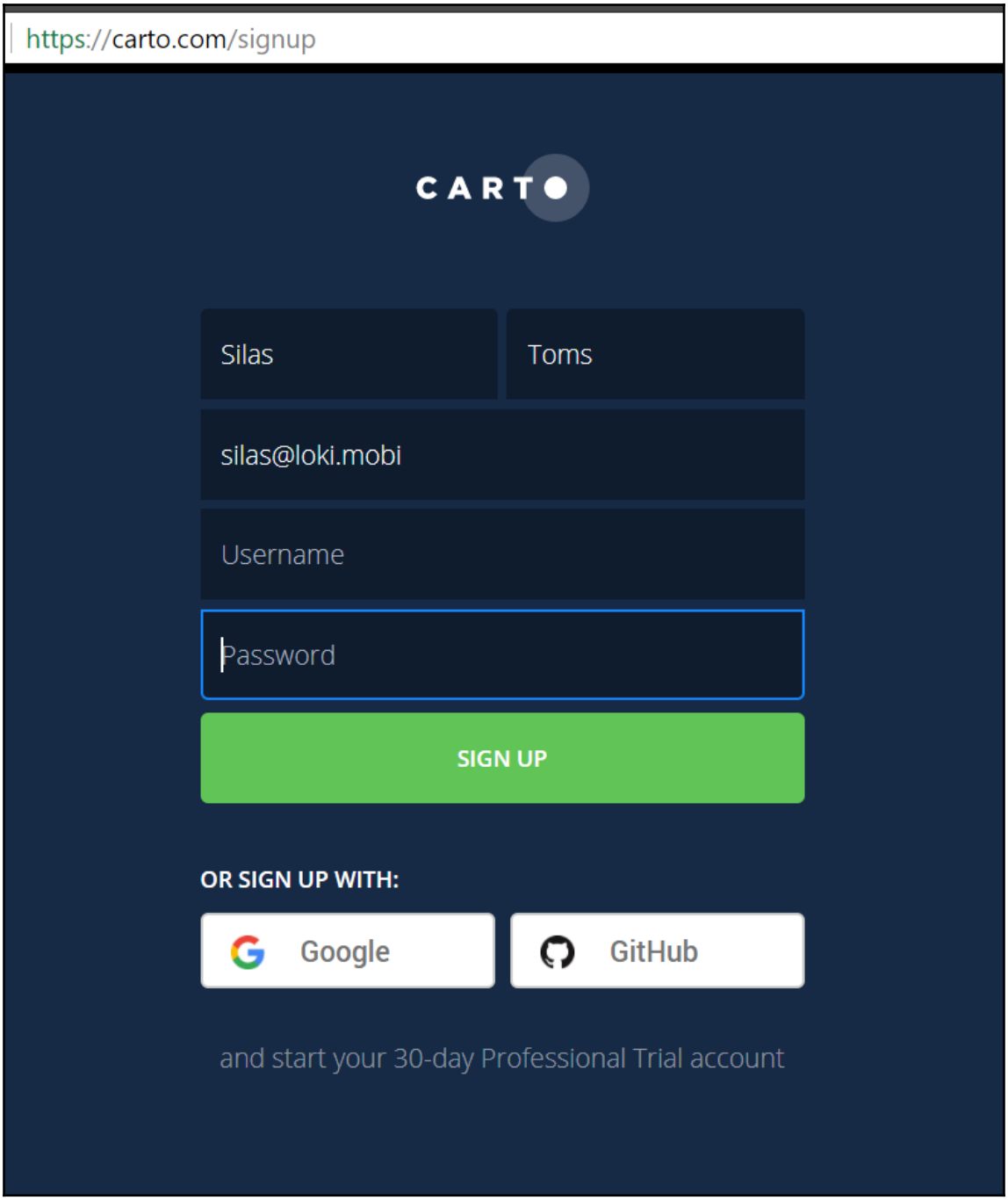


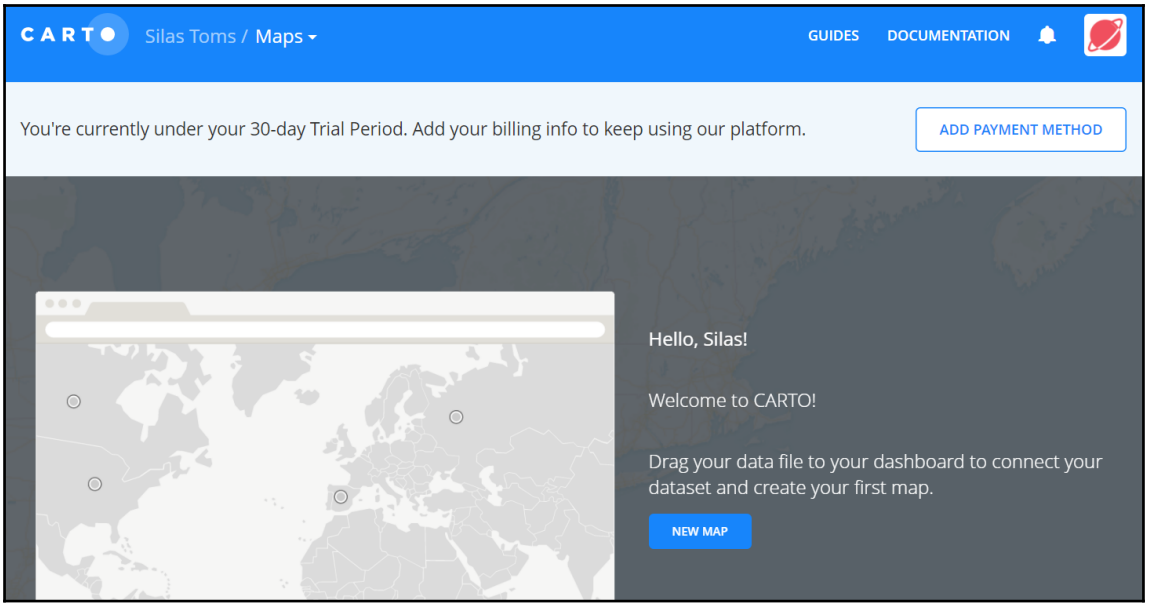

127.0.0.1:5000/nba/api/v0.1/arena/Oracle
{
"features": [
{
"geometry": {
"coordinates": [
-122.20217,
37.75131
],
"type": "Point"
},
"properties": {
"name": "Oracle Arena"
},
"type": "Feature"
}
],
"type": "FeatureCollection"
}

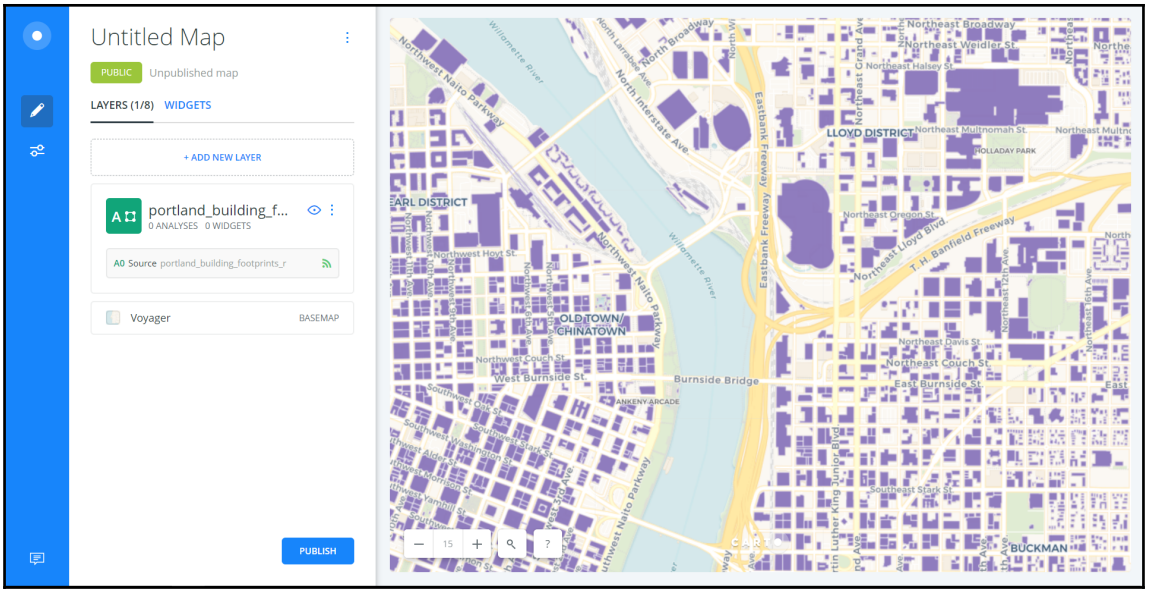

127.0.0.1:5000/nba/api/v0.1/arena/add
Lodi
You added a new arena at LatLng(37.96369, -121.28632)
Stockton
Country Club
Discovery Bay
Leaflet | Map tiles by Stamen Design, CC
Name: New Arena
Longitude: -121.28631591796876
Latitude: 37.96368875328561
Add Arena

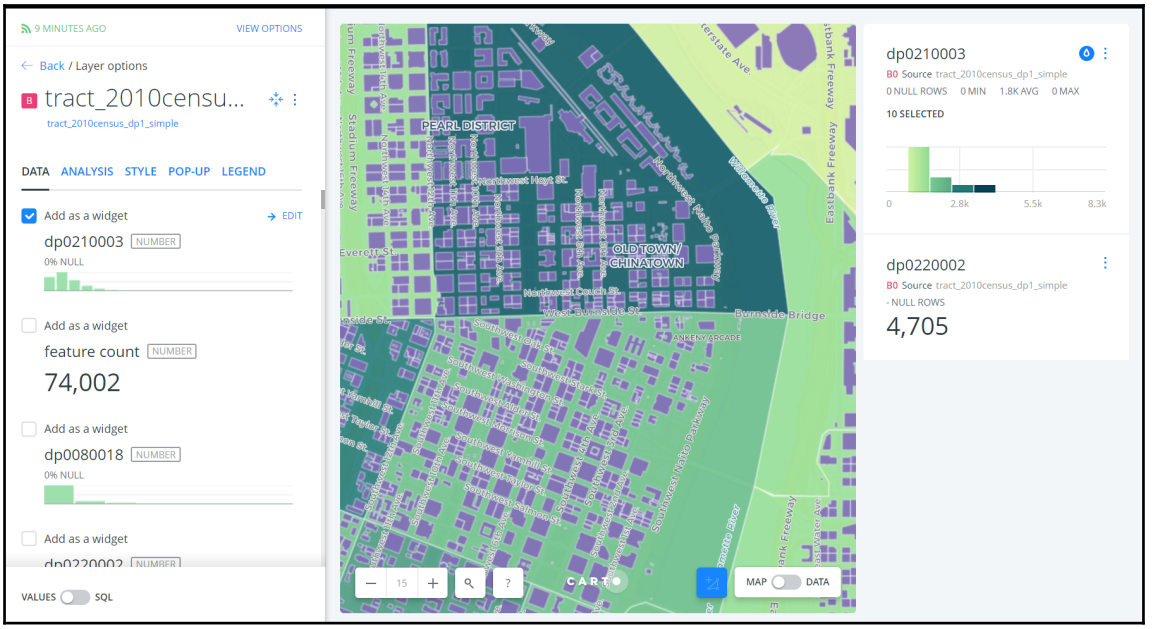

127.0.0.1:5000/nba/api/v0.1/arena/add
{
"added": "success",
"features": [
{
"geometry": {
"coordinates": [
-121.286316,
37.963689
],
"type": "Point"
},
"properties": {
"name": "Stockton Arena"
},
"type": "Feature"
}
],
"type": "FeatureCollection"
}

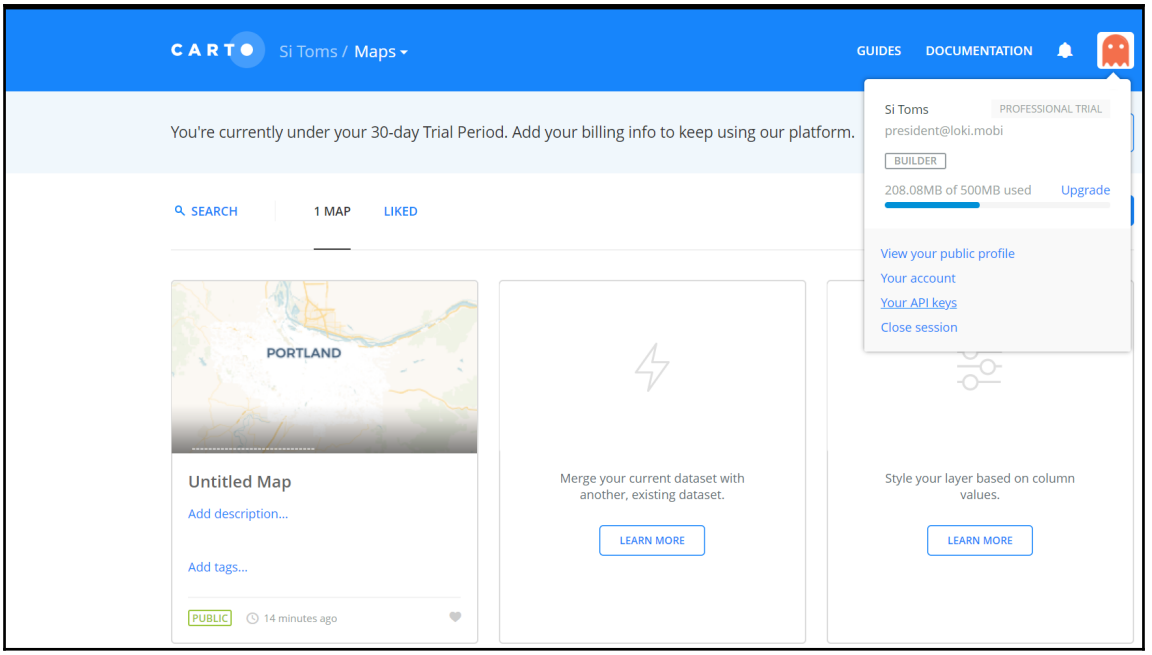
Chapter 14: Cloud Geodatabase Analysis and Visualization

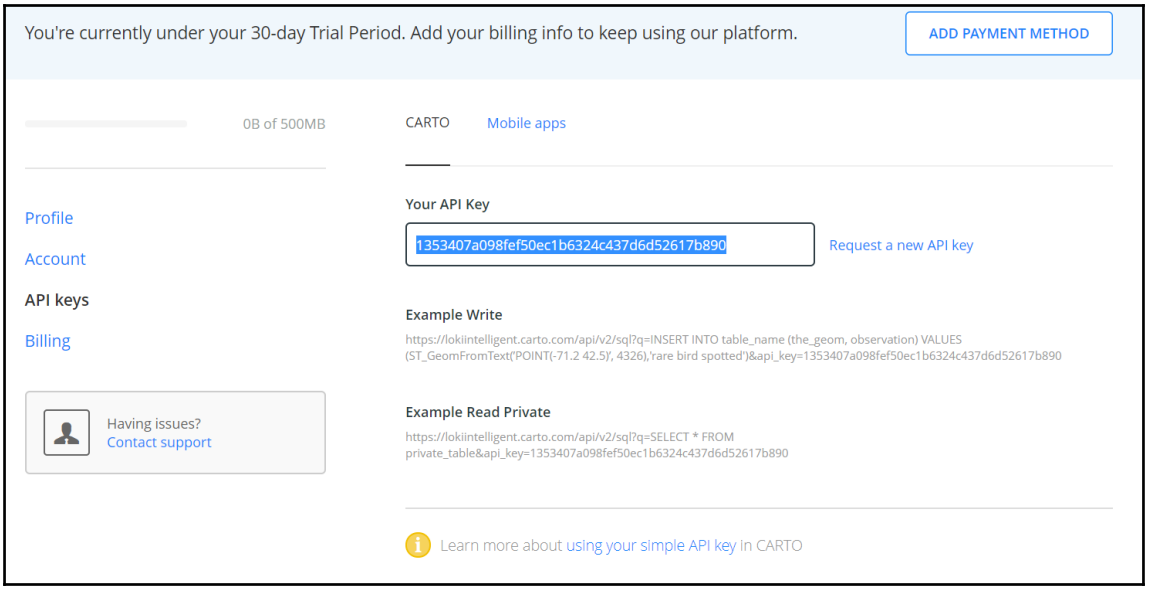

https://carto.com/signup
CARTO
Silas
Toms
silas@loki.mobi
Username
Password
SIGN UP
OR SIGN UP WITH:
Google
GitHub
and start your 30-day Professional Trial account

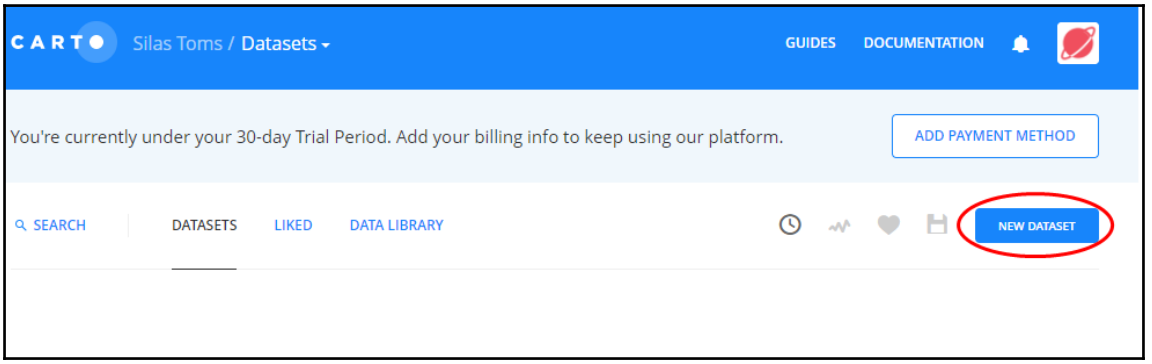

CARTO
Silas Toms / Maps
GUIDES
DOCUMENTATION
You're currently under your 30-day Trial Period. Add your billing info to keep using our platform.
ADD PAYMENT METHOD
Hello, Silas!
Welcome to CARTO!
Drag your data file to your dashboard to connect your dataset and create your first map.
NEW MAP

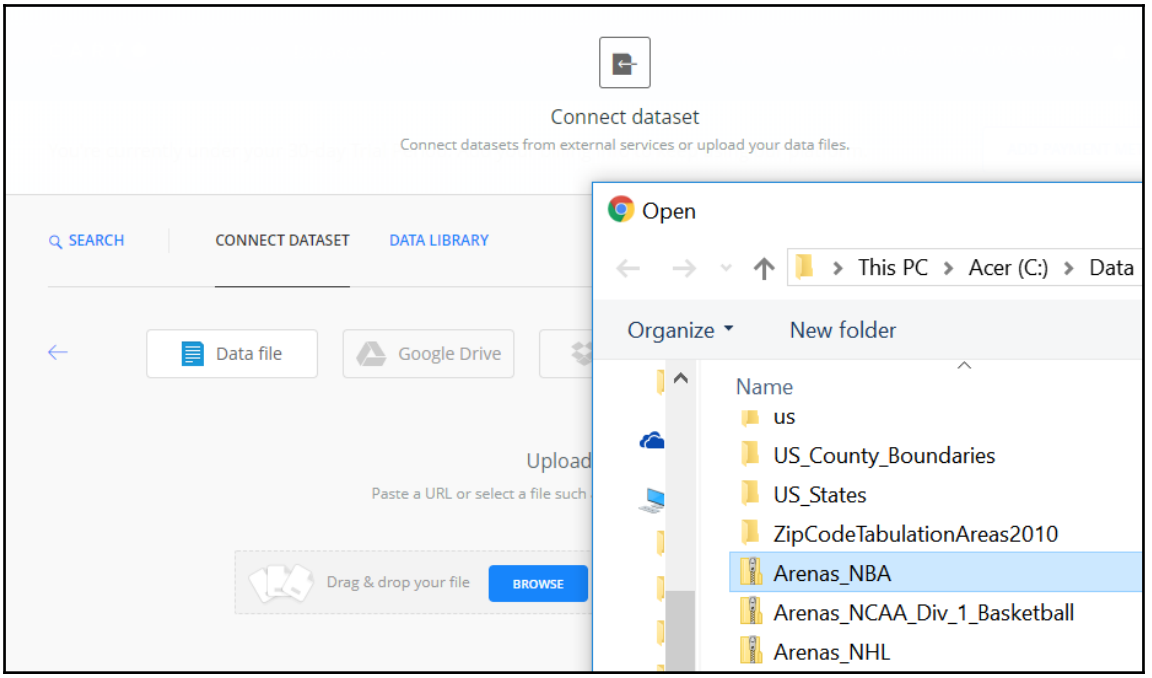

Untitled Map
PUBLIC
Unpublished map
LAYERS (1/8)
WIDGETS
+ ADD NEW LAYER
portland_building_f...
0 ANALYSES 0 WIDGETS
A0 Source portland_building_footprints_r
Voyager
BASEMAP
PUBLISH
LLOYD DISTRICT
OLD TOWN CHINATOWN
Burnside Bridge
Northwest Naito Parkway
Eastbank Freeway
T.H. Banfield Freeway
BUCKMAN


9 MINUTES AGO
VIEW OPTIONS
Back / Layer options
tract_2010censu...
tract_2010census_dp1_simple
DATA ANALYSIS STYLE POP-UP LEGEND
Add as a widget
EDIT
dp0210003 NUMBER
0% NULL
Add as a widget
feature count NUMBER
74,002
Add as a widget
dp0080018 NUMBER
0% NULL
Add as a widget
VALUES SQL
PEARL DISTRICT
OLD TOWN/ CHINATOWN
Burnside Bridge
MAP DATA
dp0210003
Source tract_2010census_dp1_simple
0 NULL ROWS 0 MIN 1.8K AVG 0 MAX
10 SELECTED
0 2.8k 5.5k 8.3k
dp0220002
Source tract_2010census_dp1_simple
- NULL ROWS
4,705


CARTO
Si Toms / Maps
GUIDES
DOCUMENTATION
You're currently under your 30-day Trial Period. Add your billing info to keep using our platform.
SEARCH
1 MAP
LIKED
Si Toms
PROFESSIONAL TRIAL
president@loki.mobi
BUILDER
208.08MB of 500MB used
Upgrade
View your public profile
Your account
Your API keys
Close session
PORTLAND
Untitled Map
Add description...
Add tags...
PUBLIC
14 minutes ago
Merge your current dataset with another, existing dataset.
LEARN MORE
Style your layer based on column values.
LEARN MORE

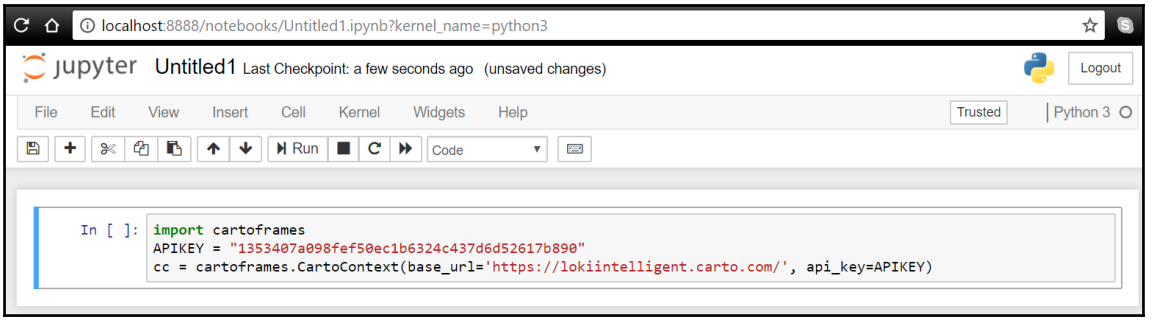

You're currently under your 30-day Trial Period. Add your billing info to keep using our platform.
ADD PAYMENT METHOD
0B of 500MB
CARTO
Mobile apps
Profile
Account
API keys
Billing
Having issues?
Contact support
Your API Key
1353407a098fef50ec1b6324c437d6d52617b890
Request a new API key
Example Write
https://lokiintelligent.carto.com/api/v2/sql?q=INSERT INTO table_name (the_geom, observation) VALUES (ST_GeomFromText('POINT(-71.2 42.5)', 4326),'rare bird spotted')&api_key=1353407a098fef50ec1b6324c437d6d52617b890
Example Read Private
https://lokiintelligent.carto.com/api/v2/sql?q=SELECT * FROM private_table&api_key=1353407a098fef50ec1b6324c437d6d52617b890
Learn more about using your simple API key in CARTO


CARTO
Silas Toms / Datasets
GUIDES
DOCUMENTATION
You're currently under your 30-day Trial Period. Add your billing info to keep using our platform.
ADD PAYMENT METHOD
SEARCH
DATASETS
LIKED
DATA LIBRARY
NEW DATASET




```
C:\Packt\PythonScripting\Chapters\Chapter15\Scripts>virtualenv cartoenv
Using base prefix 'c:\\users\\admin\\appdata\\local\\programs\\python\\python36'
New python executable in C:\Packt\PythonScripting\Chapters\Chapter15\Scripts\cartoenv\Scripts\python.exe
Installing setuptools, pip, wheel...done.
```

```
C:\Packt\PythonScripting\Chapters\Chapter15\Scripts\cartoenv>dir
 Volume in drive C is Acer
 Volume Serial Number is CA9C-6B12

 Directory of C:\Packt\PythonScripting\Chapters\Chapter15\Scripts\cartoenv

02/23/2018  12:13 PM    <DIR>          .
02/23/2018  12:13 PM    <DIR>          ..
10/19/2017  12:15 PM    <DIR>          Include
02/23/2018  12:13 PM    <DIR>          Lib
02/23/2018  12:13 PM                60 pip-selfcheck.json
02/23/2018  12:13 PM    <DIR>          Scripts
02/23/2018  12:13 PM    <DIR>          tcl
               1 File(s)             60 bytes
               6 Dir(s)  116,475,166,720 bytes free
```




```
In [2]: import cartoframes
        APIKEY = "1353407a098fef50ec1b6324c437d6d52617b890"
        cc = cartoframes.CartoContext(base_url='https://lokiintelligent.carto.com/', api_
        df = cc.read('arenas_nba')
        print(df)
```

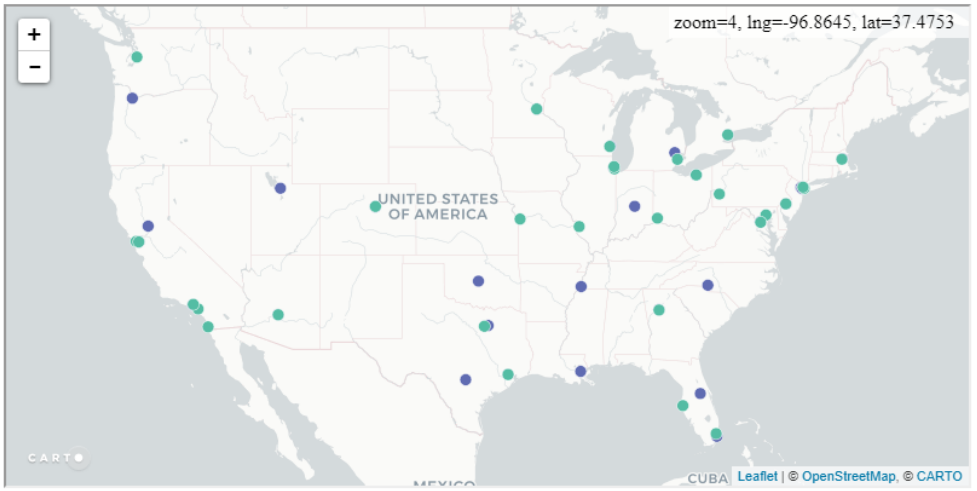
cartodb_id	address1	address2	capacity	city
1	601 Biscayne Boulevard	None	19600	Miami
2	1 Sports Parkway	None	17317	Sacramento
3	301 West South Temple	None	19911	Salt Lake City

```
In [3]: df.address1

Out[3]: cartodb_id
1                601 Biscayne Boulevard
2                      1 Sports Parkway
3                301 West South Temple
4                     191 Beale Street
5                       1 Center Court
6                   7000 Coliseum Way
7                   1601 Girod Street
8                       1 Center Court
9              600 West Amelia Street
10              1001 North 4th Street
11               2500 Victory Avenue
12                   100 Legends Way
13              1000 Chopper Circle
14               1 Philips Drive NW
15          1902 West Madison Street
16           3601 South Broad Street
17                        50 Route 120
18             4 Pennsylvania Plaza
19                   601 F Street NW
```

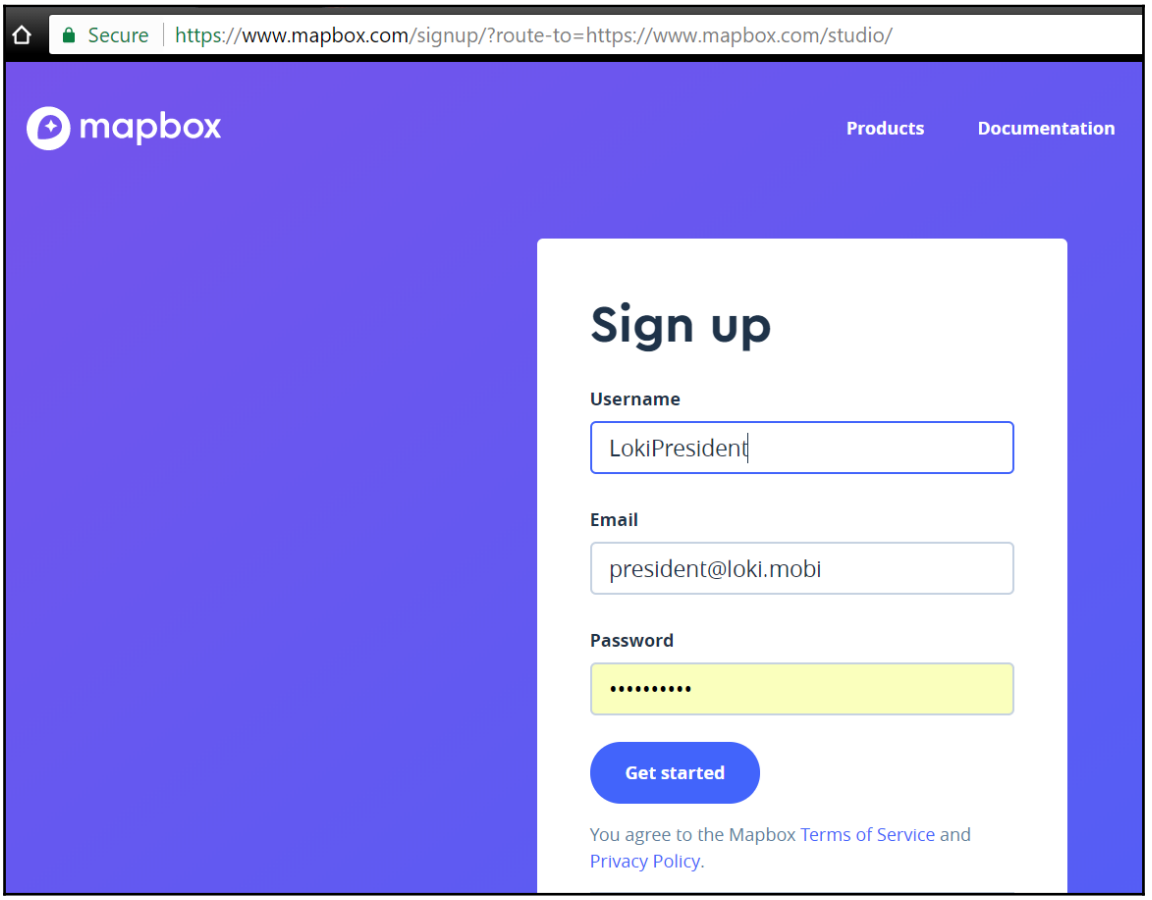
```
In [28]: import pandas as pd
df = pd.read_csv(r'C:\Data\us\ca\sacramento.csv')
cc.write(df, 'sacramento_addresses')

c:\packt\pythonscripting\chapters\chapter15\scripts\cartoenv\lib\site-packages\IPython\core\interactiveshell.py:2728: DtypeWarn
ing: Columns (2) have mixed types. Specify dtype option on import or set low_memory=False.
  interactivity=interactivity, compiler=compiler, result=result)

The following columns were changed in the CARTO copy of this dataframe:
LON -> lon
LAT -> lat
NUMBER -> number
STREET -> street
UNIT -> unit
CITY -> city
DISTRICT -> district
REGION -> region
POSTCODE -> postcode
ID -> id
HASH -> hash
Table successfully written to CARTO: https://lokiintelligent.carto.com/dataset/sacramento_addresses
```

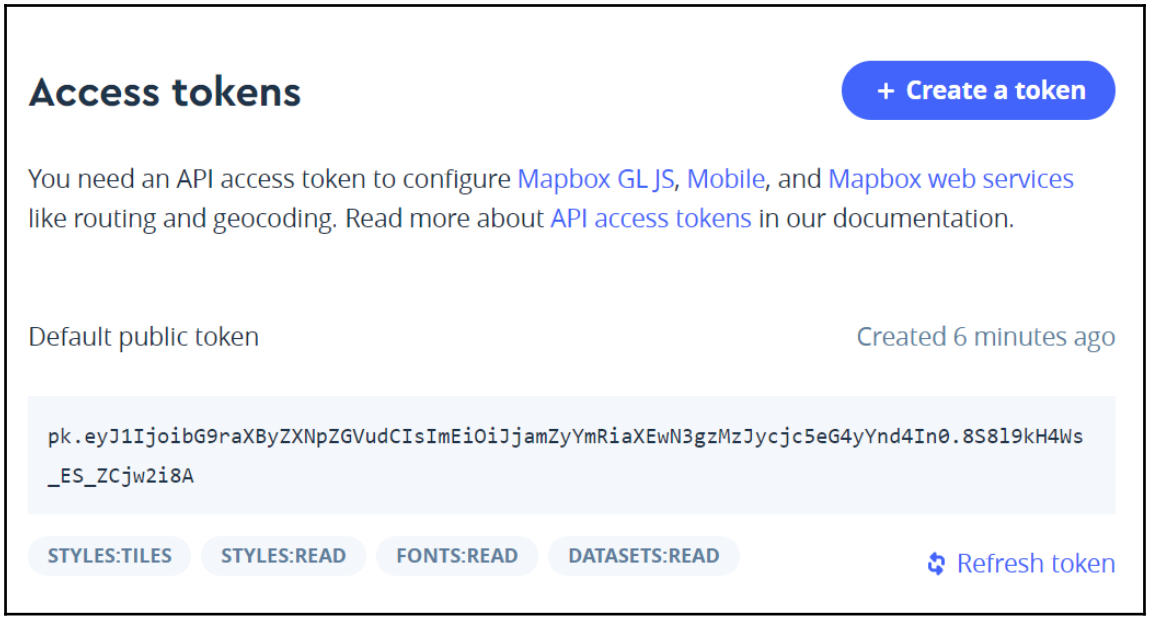
In [27]:
```
from cartoframes import Layer, BaseMap, styling
cc.map(layers=[BaseMap('light'),
               Layer('arenas_nba',),
              Layer('stadiums_mlb')], interactive=True)
```

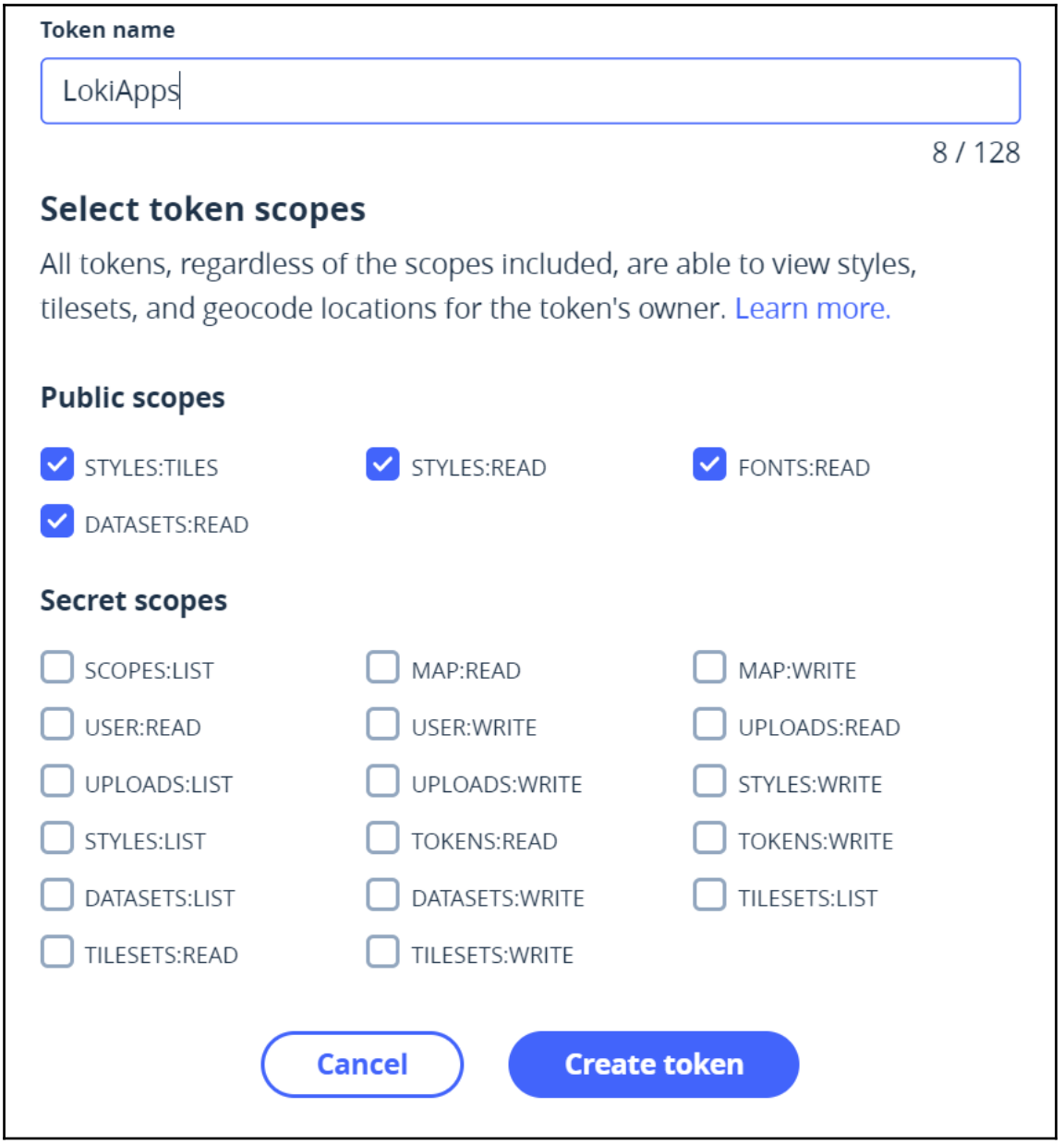
Out[27]:



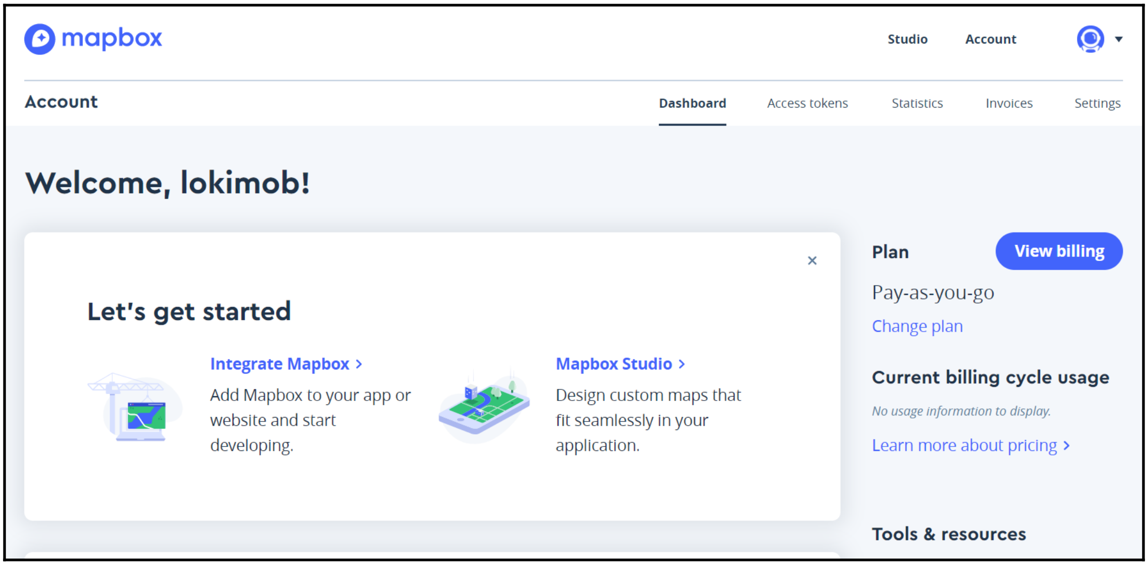
Chapter 15: Automating Cloud Cartography

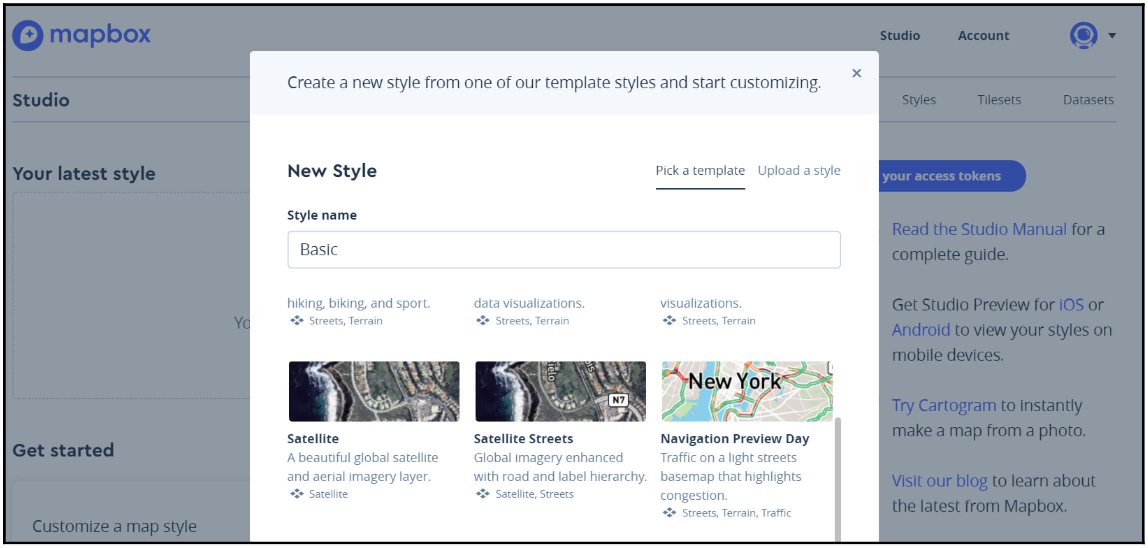


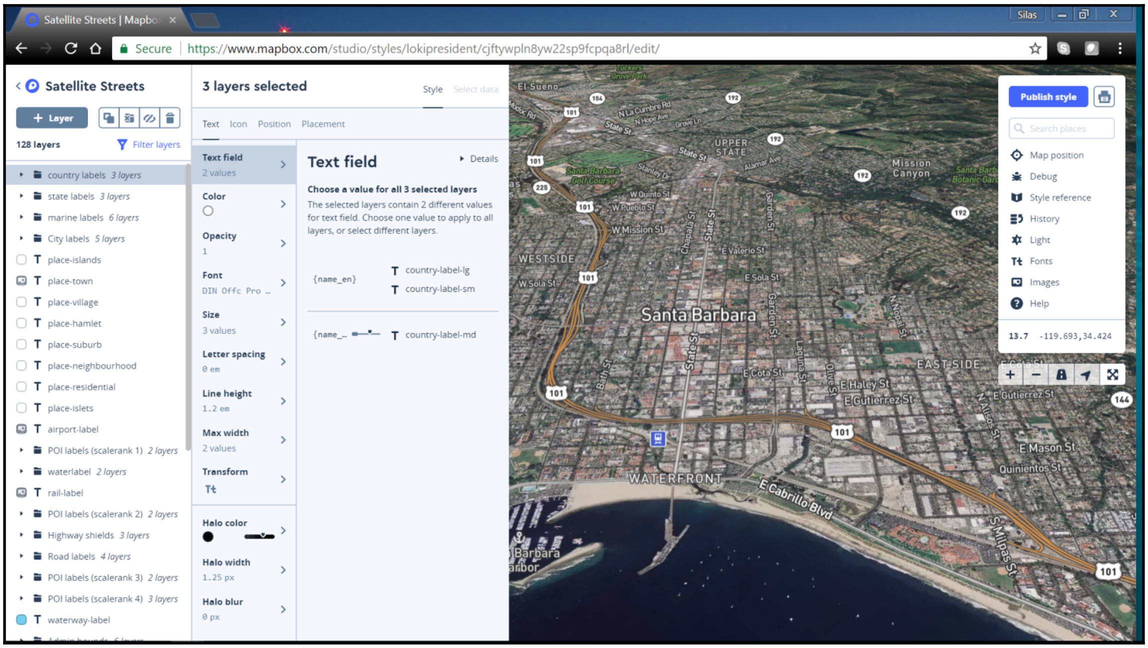

Access tokens
+ Create a token
You need an API access token to configure Mapbox GL JS, Mobile, and Mapbox web services like routing and geocoding. Read more about API access tokens in our documentation.
Default public token
Created 6 minutes ago
pk.eyJ1IjoibG9raXByZXNpZGVudCIsImEiOiJjamZyYmRiaXEwN3gzMzJycjc5eG4yYnd4In0.8S8l9kH4Ws_ES_ZCjw2i8A
STYLES:TILES
STYLES:READ
FONTS:READ
DATASETS:READ
Refresh token

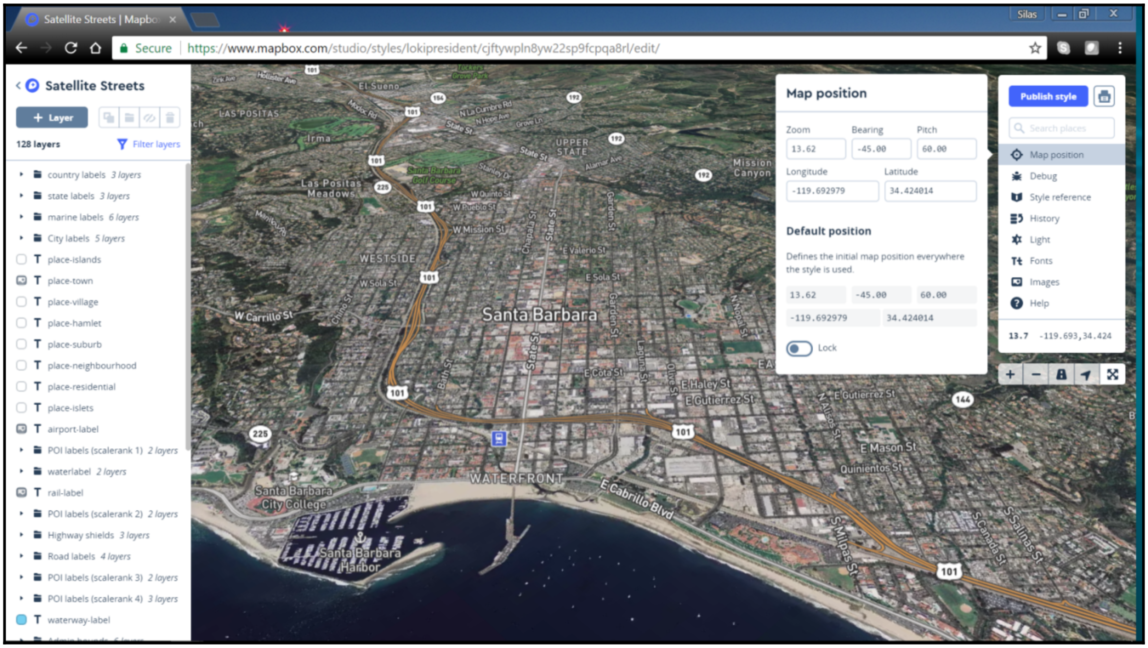

Token name
LokiApps
8 / 128
Select token scopes
All tokens, regardless of the scopes included, are able to view styles, tilesets, and geocode locations for the token's owner. Learn more.
Public scopes
STYLES:TILES
STYLES:READ
FONTS:READ
DATASETS:READ
Secret scopes
SCOPES:LIST
MAP:READ
MAP:WRITE
USER:READ
USER:WRITE
UPLOADS:READ
UPLOADS:LIST
UPLOADS:WRITE
STYLES:WRITE
STYLES:LIST
TOKENS:READ
TOKENS:WRITE
DATASETS:LIST
DATASETS:WRITE
TILESETS:LIST
TILESETS:READ
TILESETS:WRITE
Cancel
Create token

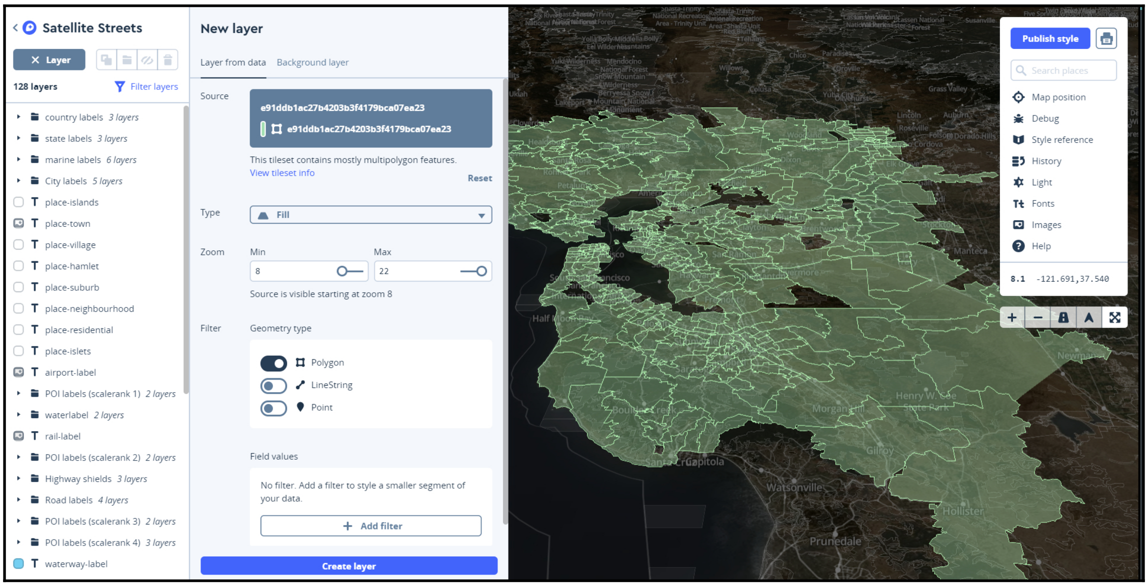

Bay Area Zips
1 feature
Import
Select a drawing tool and click on the map to start drawing. Double click to finish line and polygon features. Single click on a feature to select it, and click again once selected to change its shape.
Esc to cancel drawing
Delete to delete a feature or position
Shift + click to select multiple features
Save
Export
Search places
Search dataset
Background style
Reference tileset
History
Help
13 -122.217,37.775
SAN ANTONIO
LAUREL
FRUITVALE
MELROSE
FERNSIDE
EAST END
MILLSMONT
SEMINARY PARK
LOCKWOOD GARDENS
Bancroft Ave
Alameda Ave
Foothill Blvd


mapbox
Studio
Account
Account
Dashboard
Access tokens
Statistics
Invoices
Settings
Welcome, lokimob!
Let's get started
Integrate Mapbox >
Add Mapbox to your app or website and start developing.
Mapbox Studio >
Design custom maps that fit seamlessly in your application.
Plan
View billing
Pay-as-you-go
Change plan
Current billing cycle usage
No usage information to display.
Learn more about pricing >
Tools & resources

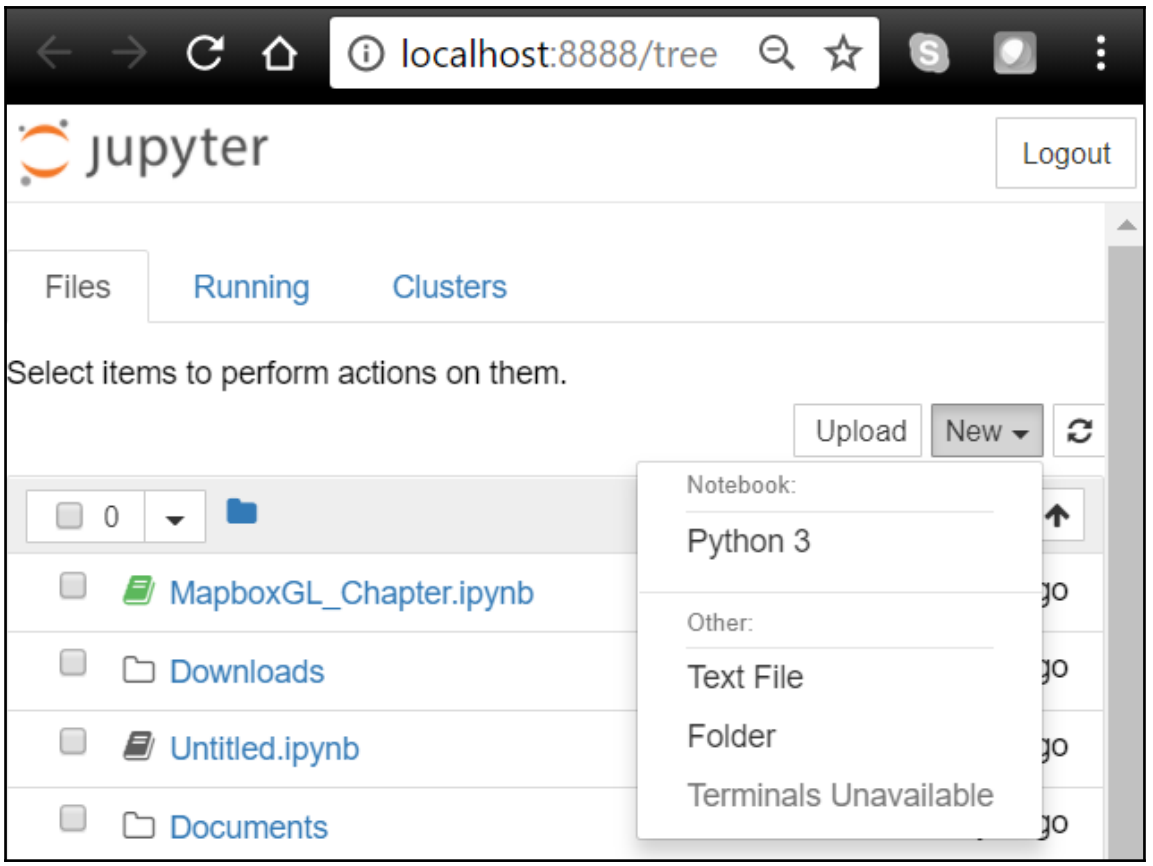

mapbox
Studio
Account
Studio
Styles
Tilesets
Datasets
Your latest style
Get started
Customize a map style
Create a new style from one of our template styles and start customizing.
New Style
Pick a template
Upload a style
Style name
Basic
hiking, biking, and sport.
Streets, Terrain
data visualizations.
Streets, Terrain
visualizations.
Streets, Terrain
New York
Satellite
A beautiful global satellite and aerial imagery layer.
Satellite
Satellite Streets
Global imagery enhanced with road and label hierarchy.
Satellite, Streets
Navigation Preview Day
Traffic on a light streets basemap that highlights congestion.
Streets, Terrain, Traffic
your access tokens
Read the Studio Manual for a complete guide.
Get Studio Preview for iOS or Android to view your styles on mobile devices.
Try Cartogram to instantly make a map from a photo.
Visit our blog to learn about the latest from Mapbox.

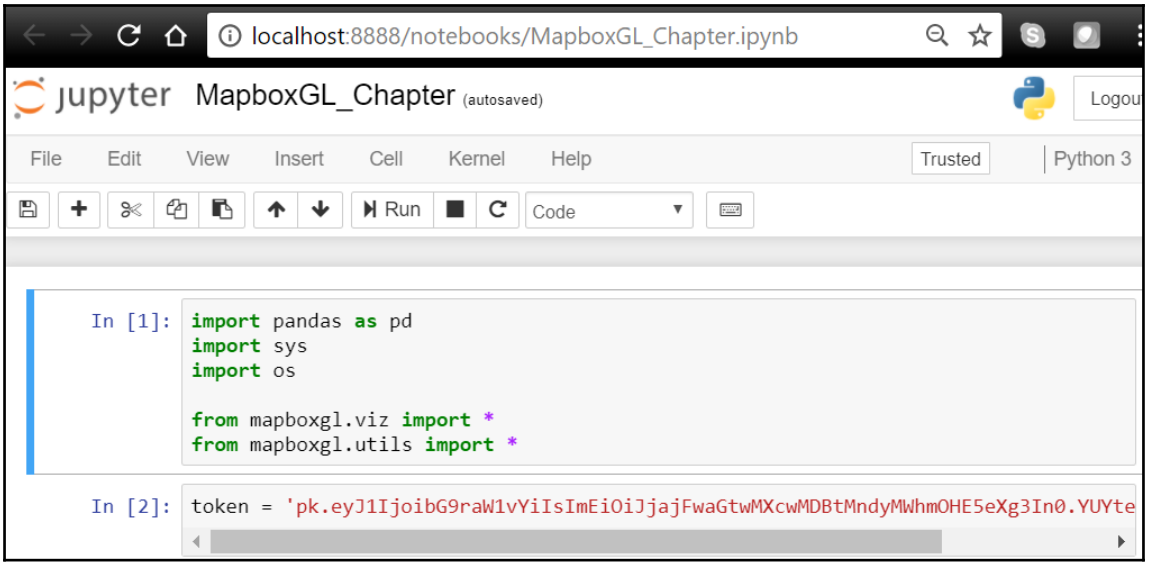

Satellite Streets | Mapbox
Secure
https://www.mapbox.com/studio/styles/lokipresident/cjftywpln8yw22sp9fcpqa8rl/edit/
Satellite Streets
Layer
128 layers
Filter layers
country labels 3 layers
state labels 3 layers
marine labels 6 layers
City labels 5 layers
place-islands
place-town
place-village
place-hamlet
place-suburb
place-neighbourhood
place-residential
place-islets
airport-label
POI labels (scalerank 1) 2 layers
waterlabel 2 layers
rail-label
POI labels (scalerank 2) 2 layers
Highway shields 3 layers
Road labels 4 layers
POI labels (scalerank 3) 2 layers
POI labels (scalerank 4) 3 layers
waterway-label
3 layers selected
Style
Text
Icon
Position
Placement
Text field
2 values
Color
Opacity
1
Font
DIN Offc Pro
Size
3 values
Letter spacing
0 em
Line height
1.2 em
Max width
2 values
Transform
Halo color
Halo width
1.25 px
Halo blur
0 px
Text field
Details
Choose a value for all 3 selected layers
The selected layers contain 2 different values for text field. Choose one value to apply to all layers, or select different layers.
{name_en}
country-label-lg
country-label-sm
country-label-md
Publish style
Search places
Map position
Debug
Style reference
History
Light
Fonts
Images
Help
13.7 -119.693,34.424
Santa Barbara
WESTSIDE
UPPER STATE
Mission Canyon
EAST SIDE
WATERFRONT
E Cabrillo Blvd

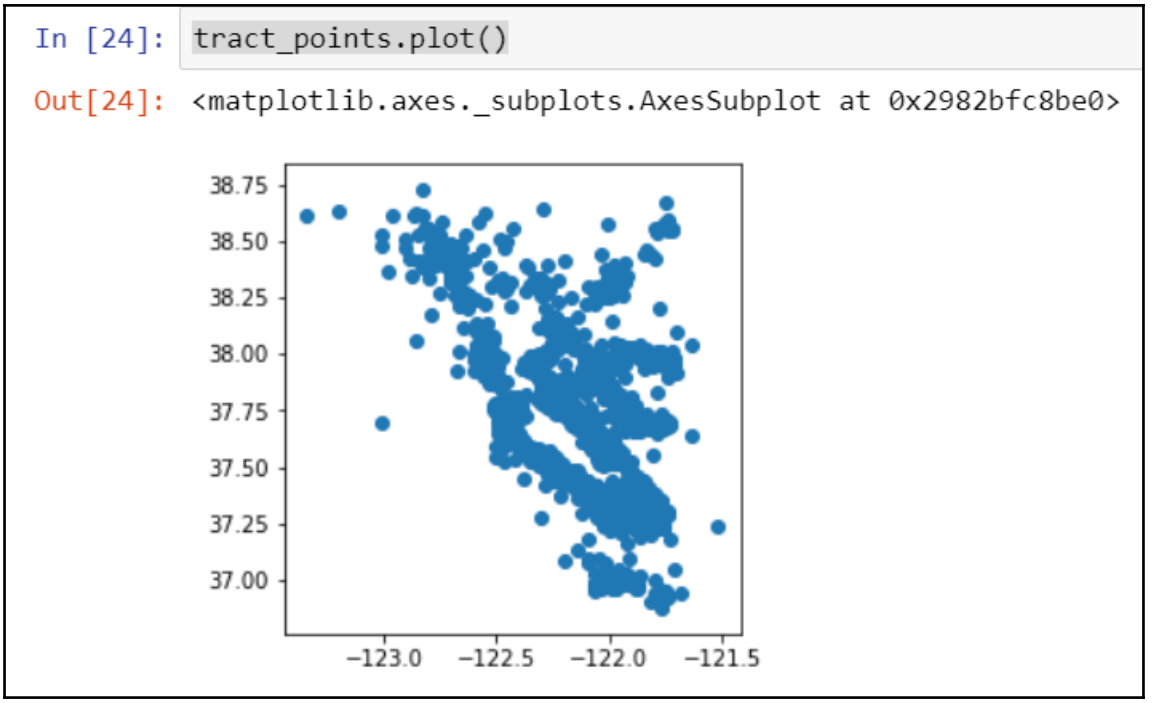

Satellite Streets | Mapbox
Secure
https://www.mapbox.com/studio/styles/lokipresident/cjftywpln8yw22sp9fcpqa8rl/edit/
Satellite Streets
Layer
128 layers
Filter layers
country labels 3 layers
state labels 3 layers
marine labels 6 layers
City labels 5 layers
place-islands
place-town
place-village
place-hamlet
place-suburb
place-neighbourhood
place-residential
place-islets
airport-label
POI labels (scalerank 1) 2 layers
waterlabel 2 layers
rail-label
POI labels (scalerank 2) 2 layers
Highway shields 3 layers
Road labels 4 layers
POI labels (scalerank 3) 2 layers
POI labels (scalerank 4) 3 layers
waterway-label
Map position
Zoom
Bearing
Pitch
13.62
-45.00
60.00
Longitude
Latitude
-119.692979
34.424014
Default position
Defines the initial map position everywhere the style is used.
13.62
-45.00
60.00
-119.692979
34.424014
Lock
Publish style
Search places
Map position
Debug
Style reference
History
Light
Fonts
Images
Help
13.7 -119.693,34.424
Santa Barbara
WATERFRONT
E Cabrillo Blvd
Santa Barbara City College
Santa Barbara Harbor
W Carrillo St
WESTSIDE
E Haley St
E Gutierrez St
E Mason St
Quinientos St
UPPER STATE
Mission Canyon
Las Positas Meadows
Irma
El Sueno
E Cota St
101


Satellite Streets
Layer
128 layers
Filter layers
country labels 3 layers
state labels 3 layers
marine labels 6 layers
City labels 5 layers
place-islands
place-town
place-village
place-hamlet
place-suburb
place-neighbourhood
place-residential
place-islets
airport-label
POI labels (scalerank 1) 2 layers
waterlabel 2 layers
rail-label
POI labels (scalerank 2) 2 layers
Highway shields 3 layers
Road labels 4 layers
POI labels (scalerank 3) 2 layers
POI labels (scalerank 4) 3 layers
waterway-label
New layer
Layer from data
Background layer
Source
e91ddb1ac27b4203b3f4179bca07ea23
e91ddb1ac27b4203b3f4179bca07ea23
This tileset contains mostly multipolygon features.
View tileset info
Reset
Type
Fill
Zoom
Min
Max
8
22
Source is visible starting at zoom 8
Filter
Geometry type
Polygon
LineString
Point
Field values
No filter. Add a filter to style a smaller segment of your data.
Add filter
Create layer
Publish style
Search places
Map position
Debug
Style reference
History
Light
Fonts
Images
Help
8.1 -121.691,37.540
Watsonville
Hollister
Gilroy
Prunedale

```
C:\Users\admin>jupyter notebook
[I 23:00:19.649 NotebookApp] Serving notebooks from local directory: C:\Users\admin
[I 23:03:07.379 NotebookApp] 0 active kernels
[I 23:03:07.381 NotebookApp] The Jupyter Notebook is running at:
[I 23:03:07.382 NotebookApp] http://localhost:8888/?token=1ad280d3b980dc6578f3964000824e
[I 23:03:07.390 NotebookApp] Use Control-C to stop this server and shut down all kernels
[C 23:03:07.398 NotebookApp]

    Copy/paste this URL into your browser when you connect for the first time,
    to login with a token:
        http://localhost:8888/?token=1ad280d3b980dc6578f3964000824ebd19f6eb743ab47bef
[I 23:03:08.493 NotebookApp] Accepting one-time-token-authenticated connection from ::1
[I 23:03:09.431 NotebookApp] Kernel started: 2a1ffde6-64c0-4529-9ff7-63a199fecde6
[W 23:03:10.083 NotebookApp] 404 GET /nbextensions/widgets/notebook/js/extension.js?v=20
host:8888/notebooks/MapboxGL_Chapter.ipynb
```




localhost:8888/notebooks/MapboxGL_Chapter.ipynb
jupyter MapboxGL_Chapter (autosaved)
Logou
File Edit View Insert Cell Kernel Help
Trusted
Python 3
Run
Code
In [1]:
import pandas as pd
import sys
import os
from mapboxgl.viz import *
from mapboxgl.utils import *
In [2]:
token = 'pk.eyJ1IjoibG9raW1vYiIsImEiOiJjajFwaGtwMXcwMDBtMndyMWhmOHE5eXg3In0.YUYte

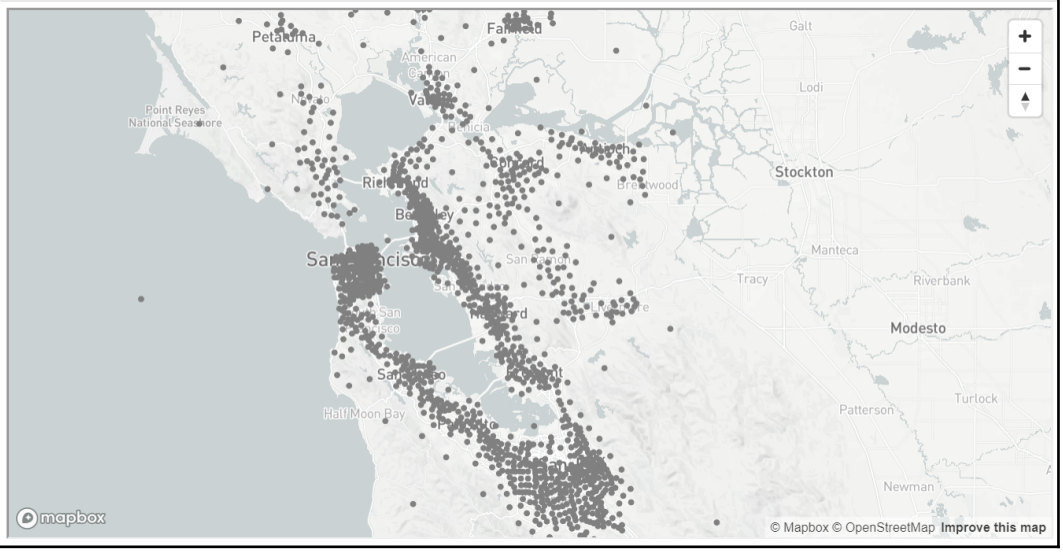

In [24]:
tract_points.plot()
Out[24]:
<matplotlib.axes._subplots.AxesSubplot at 0x2982bfc8be0>
38.75
38.50
38.25
38.00
37.75
37.50
37.25
37.00
−123.0
−122.5
−122.0
−121.5

```
In [53]: tract_points[:5]
```

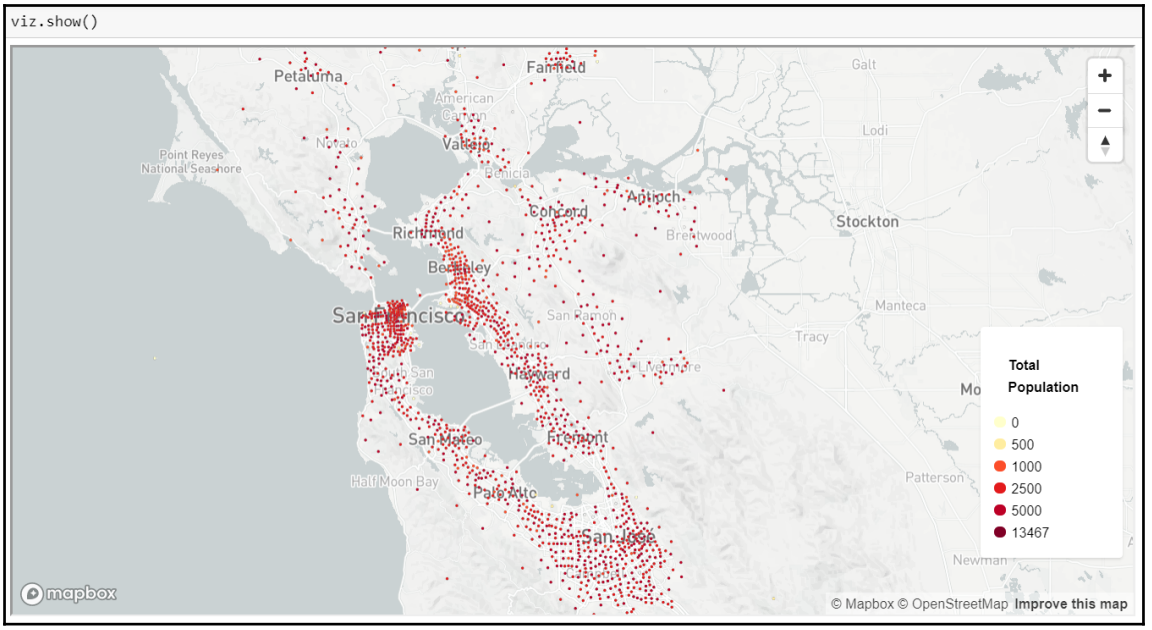
Out[53]:

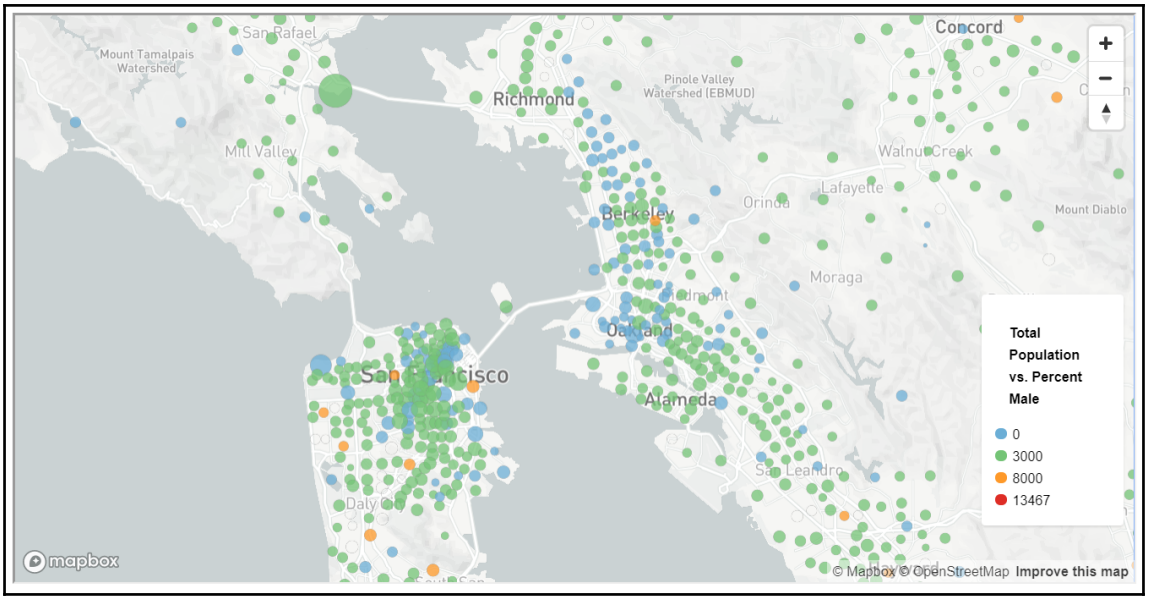
	Total Population	Male Population	Female Population	centroids
0	4893	2395	2498	POINT (-122.2925253413085 38.00295823758501)
1	6444	3097	3347	POINT (-121.7468504262252 36.95049874202599)
2	3736	1757	1979	POINT (-122.2594490259385 37.8916373721222)
3	4347	2301	2046	POINT (-122.3459716556987 37.97616227082723)
4	1952	984	968	POINT (-122.303938838024 37.8657801574032)

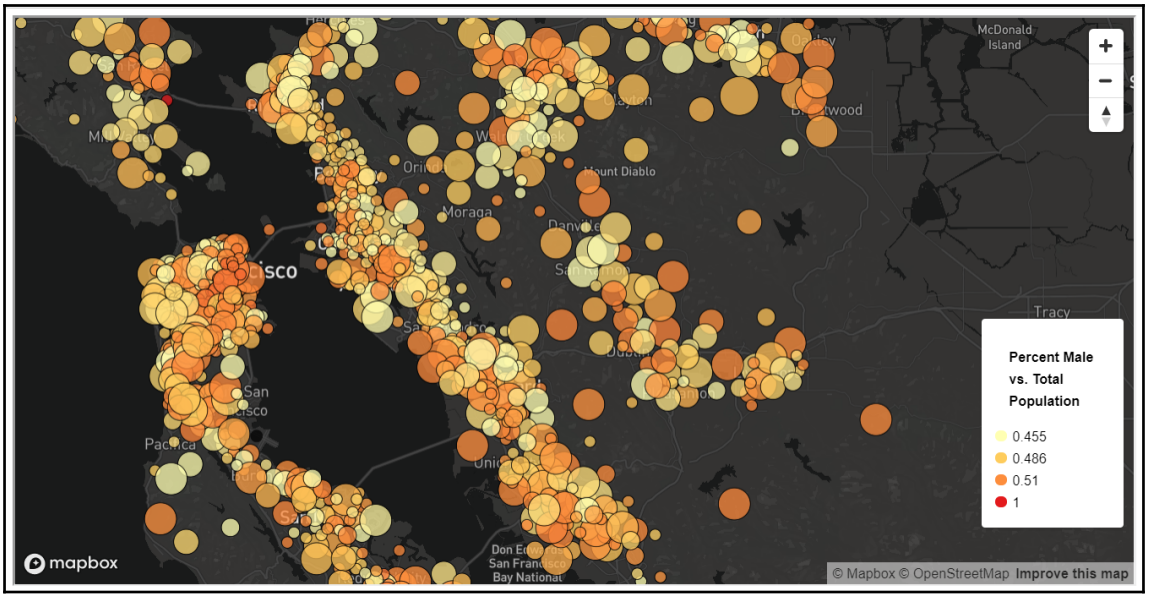
```
In [69]: viz = CircleViz('tract_points.geojson', access_token=API_TOKEN,
                        radius = 2, center = (-122, 37.75), zoom = 8)
         viz.show()
```

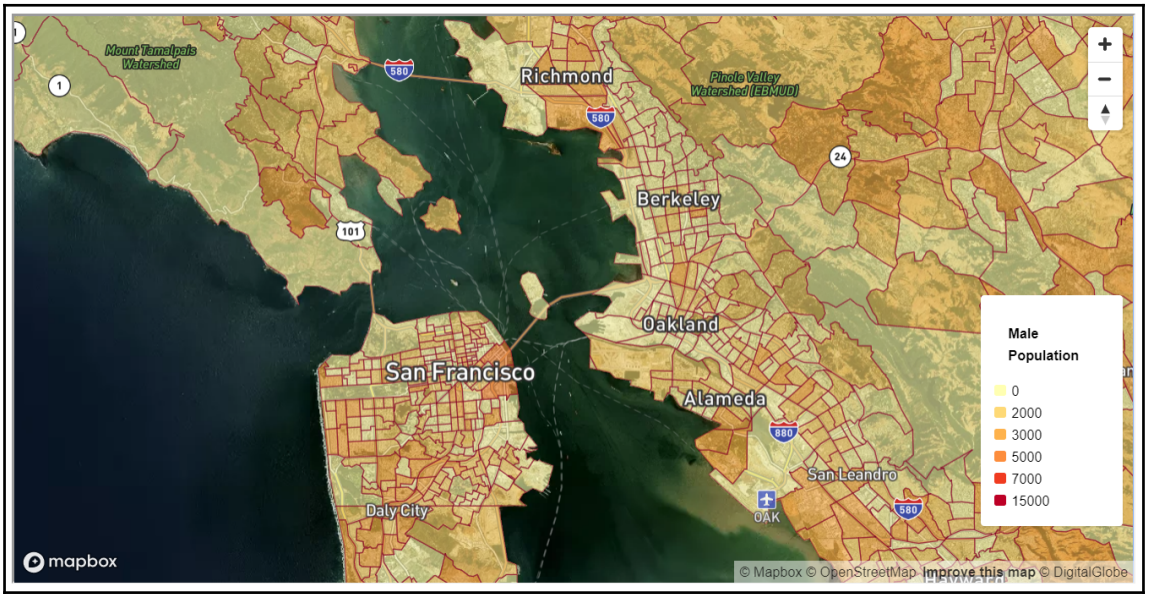


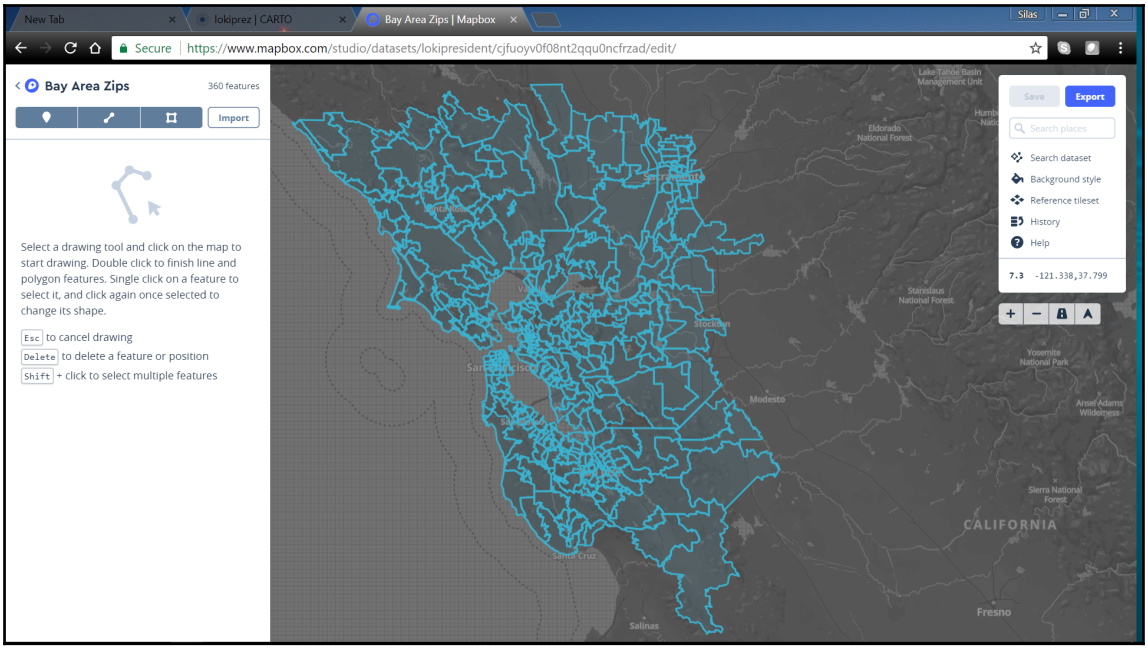
```
viz.show()
```


Petaluma
Fairfield
Galt
Point Reyes National Seashore
Vallejo
Lodi
Concord
Antioch
Stockton
Richmond
Brentwood
Berkeley
San Francisco
Manteca
Tracy
Hayward
San Mateo
Fremont
Half Moon Bay
Palo Alto
San Jose
Patterson
Newman
Total Population
0
500
1000
2500
5000
13467
mapbox
© Mapbox © OpenStreetMap Improve this map


San Rafael
Mount Tamalpais Watershed
Concord
Richmond
Pinole Valley Watershed (EBMUD)
Mill Valley
Walnut Creek
Lafayette
Orinda
Berkeley
Mount Diablo
Moraga
Oakland
San Francisco
Alameda
San Leandro
Daly City
Total Population vs. Percent Male
0
3000
8000
13467
mapbox
© Mapbox © OpenStreetMap Improve this map

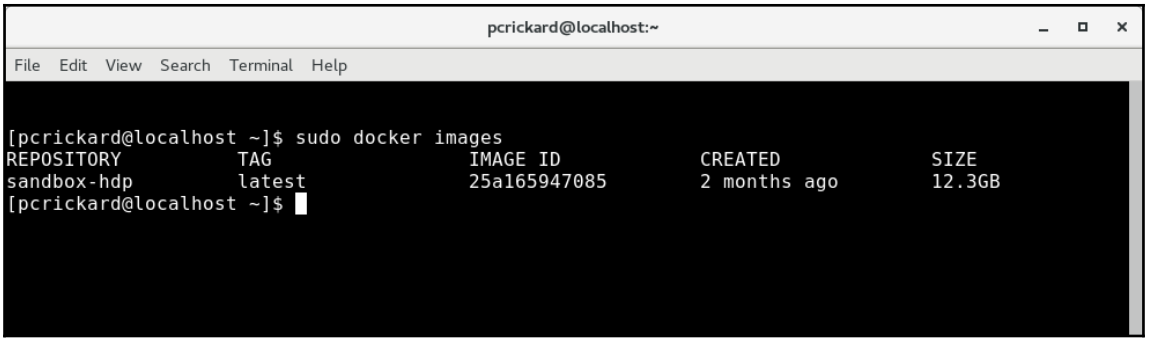

Percent Male vs. Total Population
0.455
0.486
0.51
1
mapbox
© Mapbox © OpenStreetMap Improve this map

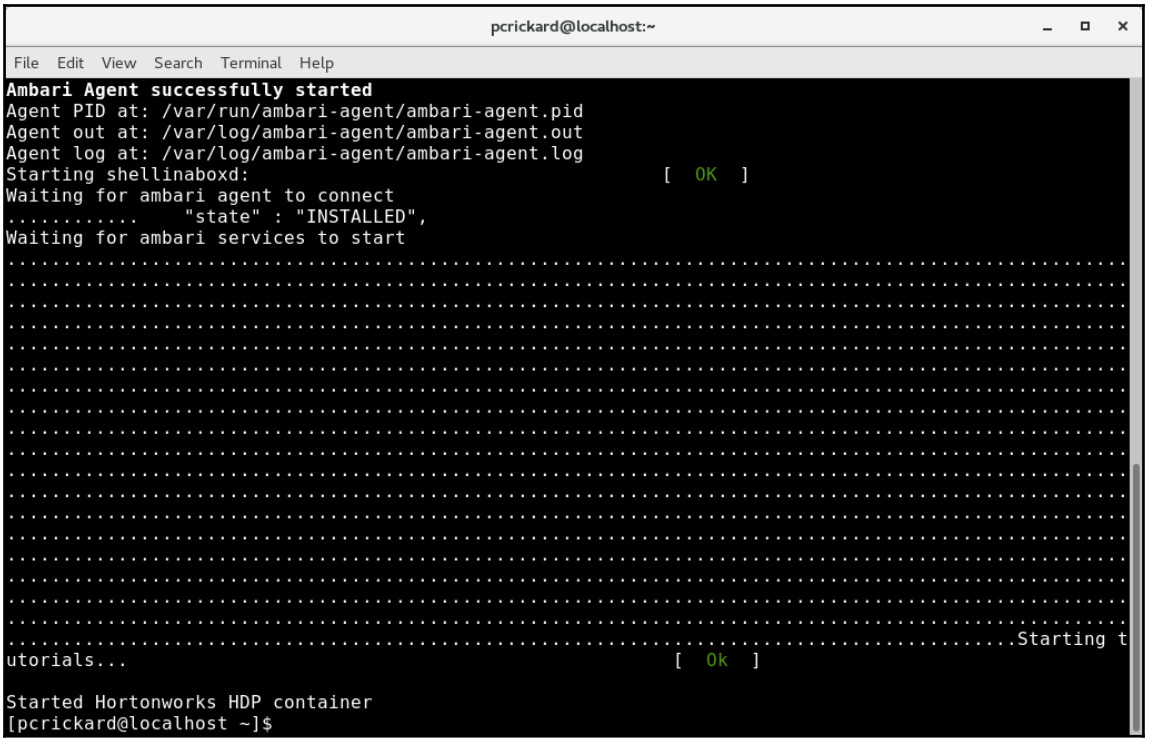

Male Population
0
2000
3000
5000
7000
15000
Richmond
Berkeley
Oakland
San Francisco
Alameda
San Leandro
Daly City
mapbox
© Mapbox © OpenStreetMap Improve this map © DigitalGlobe

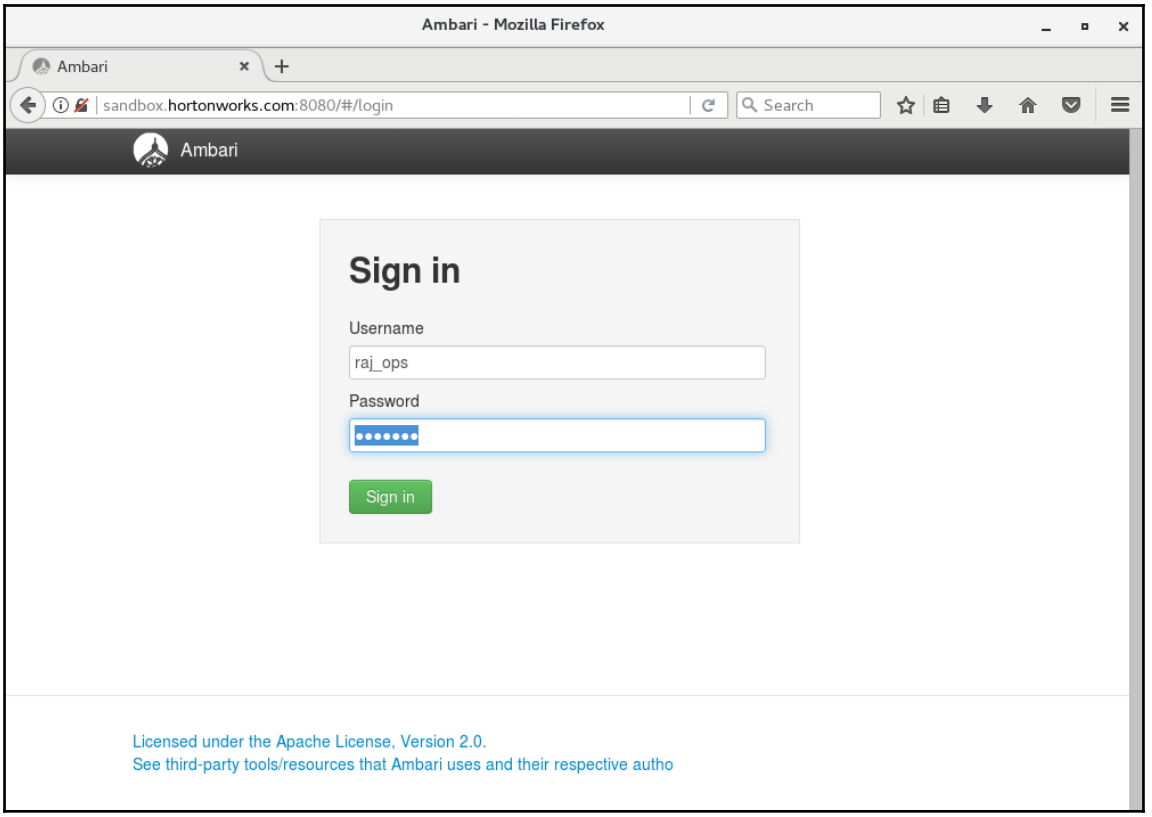

New Tab
lokiprez | CARTO
Bay Area Zips | Mapbox
Silas
Secure
https://www.mapbox.com/studio/datasets/lokipresident/cjfuoyv0f08nt2qqu0ncfrzad/edit/
Bay Area Zips
360 features
Import
Select a drawing tool and click on the map to start drawing. Double click to finish line and polygon features. Single click on a feature to select it, and click again once selected to change its shape.
Esc to cancel drawing
Delete to delete a feature or position
Shift + click to select multiple features
Save
Export
Search places
Search dataset
Background style
Reference tileset
History
Help
7.3 -121.338,37.799
Lake Tahoe Basin Management Unit
Eldorado National Forest
Stanislaus National Forest
Stockton
Modesto
Yosemite National Park
Ansel Adams Wilderness
Sierra National Forest
CALIFORNIA
Santa Cruz
Salinas
Fresno

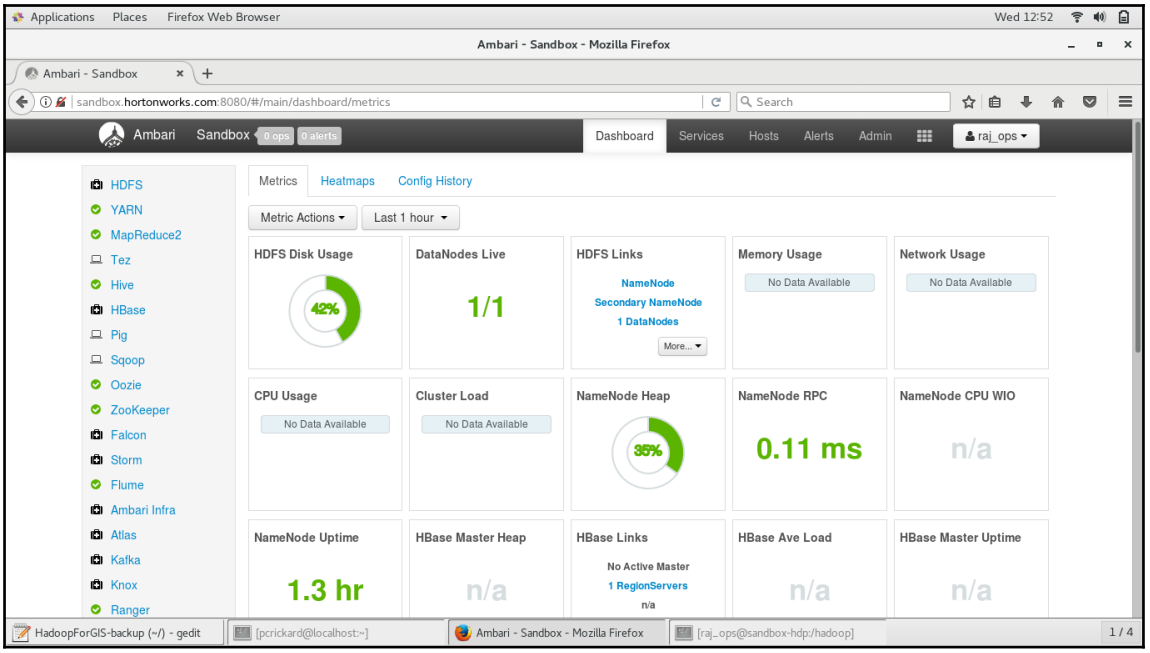
Chapter 16: Python Geoprocessing with Hadoop

```
## Next comes the main part: which users can run what software on
## which machines (the sudoers file can be shared between multiple
## systems).
## Syntax:
##
##      user    MACHINE=COMMANDS
##
## The COMMANDS section may have other options added to it.
##
## Allow root to run any commands anywhere
root    ALL=(ALL)       ALL
pcrickard       ALL=(ALL)       ALL
## Allows members of the 'sys' group to run networking, software,
## service management apps and more.
# %sys ALL = NETWORKING, SOFTWARE, SERVICES, STORAGE, DELEGATING, PROCESSES, LOCATE, DRIVERS

## Allows people in group wheel to run all commands
%wheel  ALL=(ALL)       ALL

## Same thing without a password
# %wheel        ALL=(ALL)       NOPASSWD: ALL
```

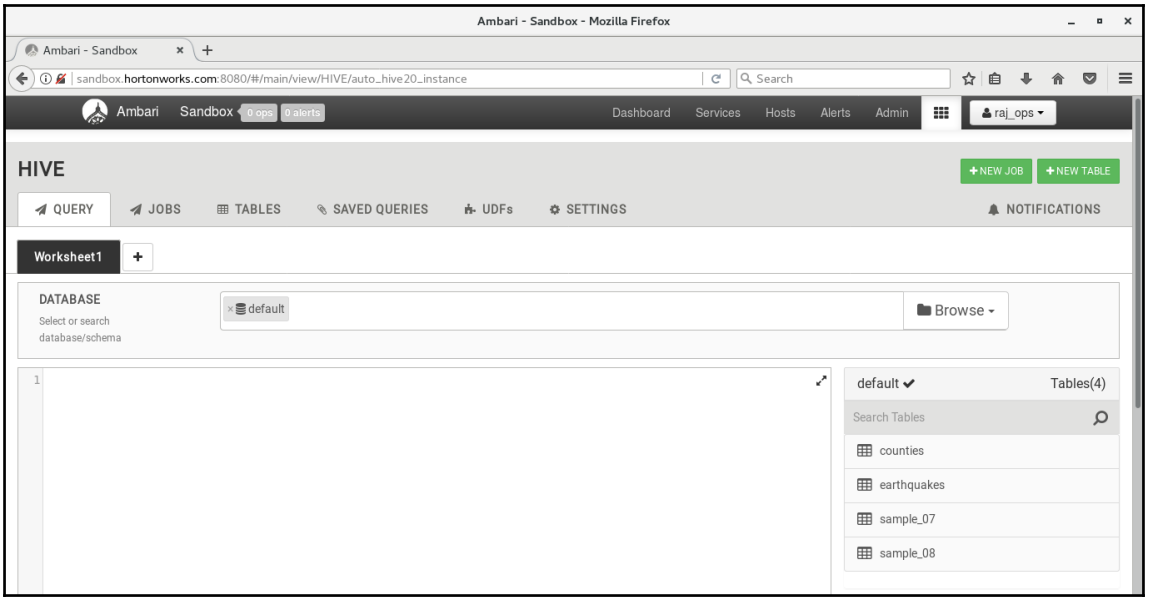


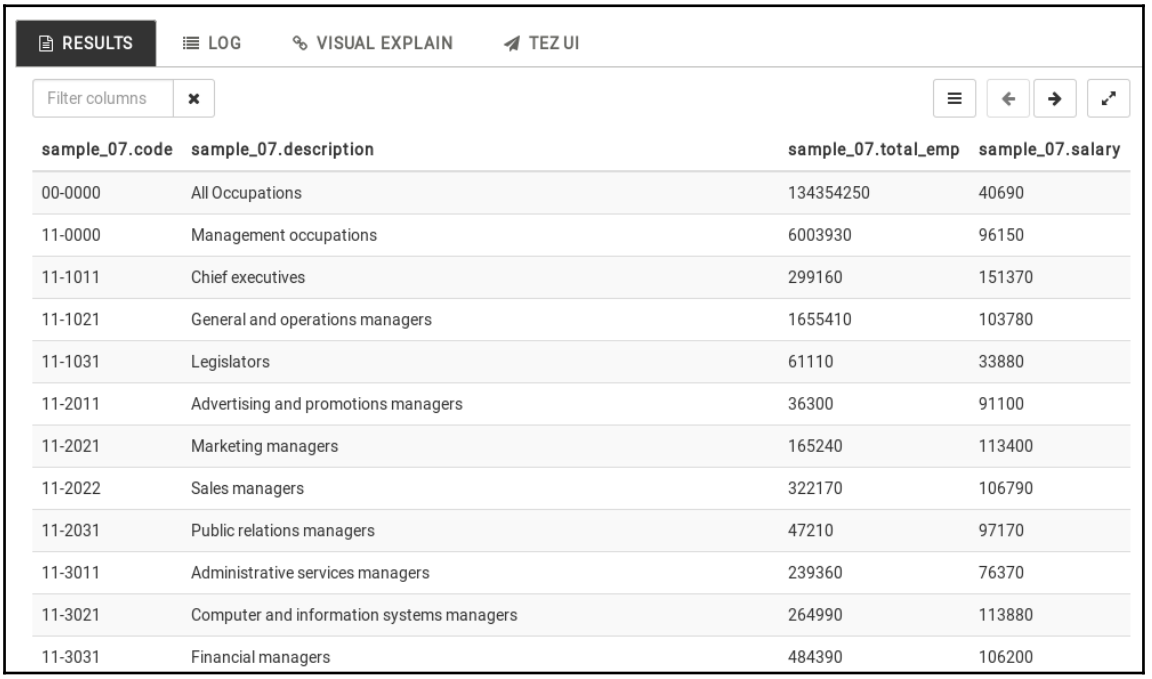

pcrickard@localhost:~
File Edit View Search Terminal Help
Ambari Agent successfully started
Agent PID at: /var/run/ambari-agent/ambari-agent.pid
Agent out at: /var/log/ambari-agent/ambari-agent.out
Agent log at: /var/log/ambari-agent/ambari-agent.log
Starting shellinaboxd: [OK]
Waiting for ambari agent to connect
..... "state" : "INSTALLED",
Waiting for ambari services to start
.....Starting t
utorials... [Ok]
Started Hortonworks HDP container
[pcrickard@localhost ~]$


Ambari - Mozilla Firefox
Ambari
sandbox.hortonworks.com:8080/#/login
Search
Ambari
Sign in
Username
raj_ops
Password
Sign in
Licensed under the Apache License, Version 2.0.
See third-party tools/resources that Ambari uses and their respective autho



mr-history	--	2017-11-10 07:38	mapred	hadoop	drwxrwxrwx
ranger	--	2017-11-10 07:37	hdfs	hdfs	drwxr-xr-x
sample.csv	0.1 kB	2018-01-31 13:03	raj_ops	hdfs	-rw-r--r--
spark2-history	--	2018-01-31 13:03	spark	hadoop	drwxrwxrwx





sample_07.code	sample_07.description	sample_07.total_emp	sample_07.salary
00-0000	All Occupations	134354250	40690
11-0000	Management occupations	6003930	96150
11-1011	Chief executives	299160	151370
11-1021	General and operations managers	1655410	103780
11-1031	Legislators	61110	33880
11-2011	Advertising and promotions managers	36300	91100
11-2021	Marketing managers	165240	113400
11-2022	Sales managers	322170	106790
11-2031	Public relations managers	47210	97170
11-3011	Administrative services managers	239360	76370
11-3021	Computer and information systems managers	264990	113880
11-3031	Financial managers	484390	106200

counties.name	cnt
Kern	36
San Bernardino	35
Imperial	28
Inyo	20
Los Angeles	18
Monterey	14
Riverside	14
Santa Clara	12
Fresno	11
San Benito	11
San Diego	7
Santa Cruz	5
San Luis Obispo	3
Ventura	3
Orange	2

counties.name	cnt
Kern	36
San Bernardino	35
Imperial	28
Inyo	20
Los Angeles	18
Monterey	14
Riverside	14
Santa Clara	12
Fresno	11
San Benito	11
San Diego	7
Santa Cruz	5
San Luis Obispo	3
Ventura	3
Orange	2