HonsProj_Artifact

October 11, 2021

Install all the relevant Libraries needed

[4]:
```
!pip install geopandas
```

Import all the Libraries needed

[5]:
```
import pandas as pd
import numpy as np
import geopandas as gpd
import matplotlib.pyplot as plt
from shapely.geometry import Point, Polygon
```

Mount the data files from my Google Drive account

[1]:
```
from google.colab import drive
drive.mount('/content/drive')
```

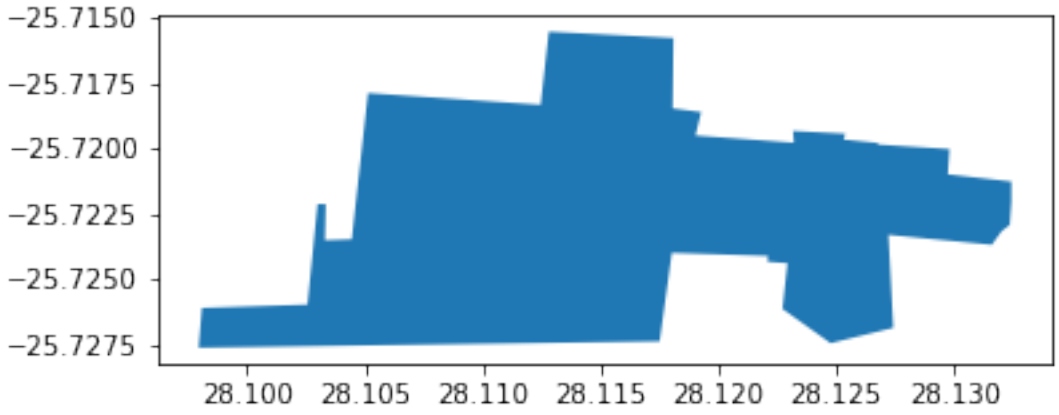
```
Mounted at /content/drive
```

Assign the root folder for where the Data files are located

[2]:
```
root_path = '/content/drive/MyDrive/HonsProj-Data'
```

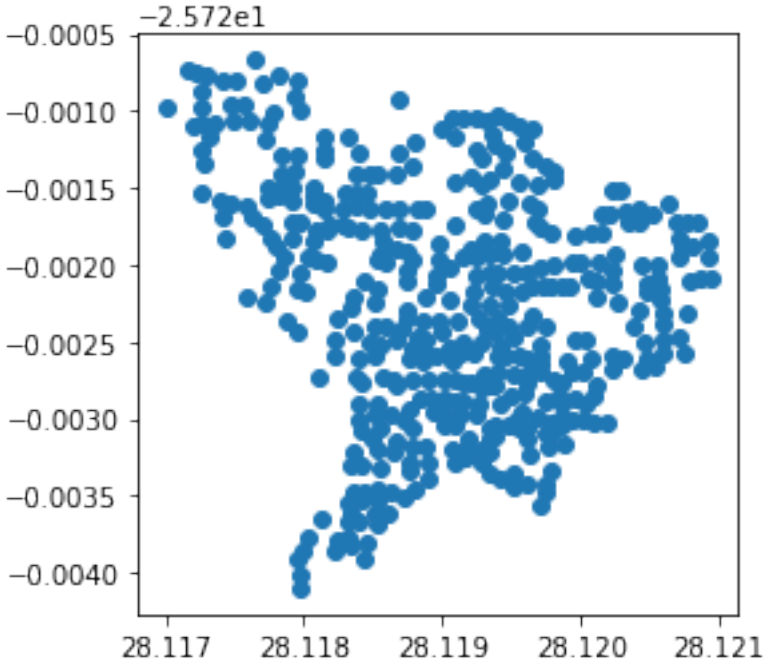
[6]:
```
melusi_map = gpd.read_file('/content/drive/MyDrive/HonsProj-Data/
 ↪GTI_Data_Delivery20210902/SHP/Melusi_Area.shp')
melusi_map.plot()
```

[6]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x7f424875c2d0>
```



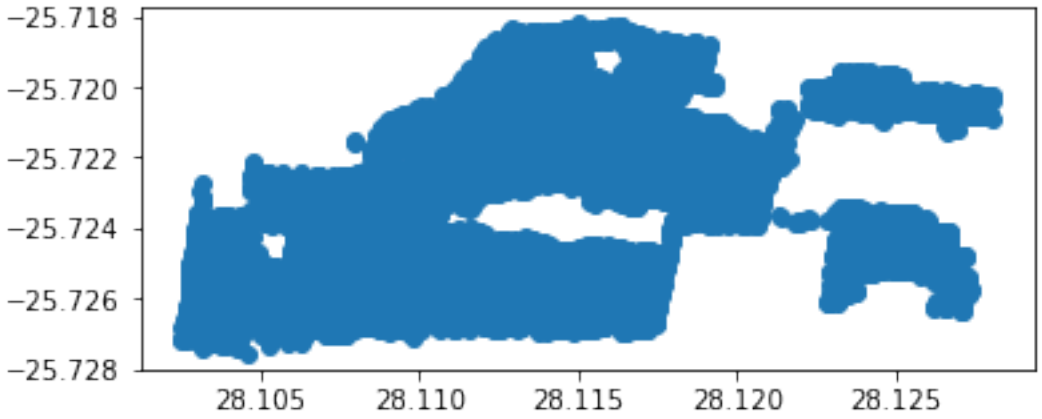
[7]:
```
melusi_map_2010 = gpd.read_file('/content/drive/MyDrive/HonsProj-Data/
↪GTI_Data_Delivery20210902/SHP/Melusi_Building_Based_Land_Use_Points_2010.shp')
melusi_map_2010.plot()
```

[7]: <matplotlib.axes._subplots.AxesSubplot at 0x7f42401dd790>



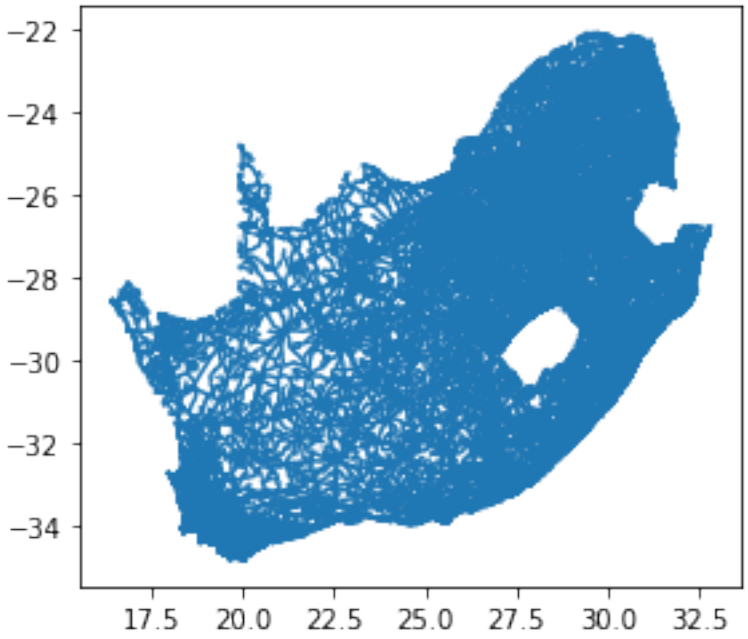
[8]:
```
melusi_map_2020 = gpd.read_file('/content/drive/MyDrive/HonsProj-Data/
↪GTI_Data_Delivery20210902/SHP/Melusi_Building_Based_Land_Use_Points_2020.shp')
melusi_map_2020.plot()
```

[8]: <matplotlib.axes._subplots.AxesSubplot at 0x7f424017a250>



[10]:
```
sa_roads = gpd.read_file('/content/drive/MyDrive/HonsProj-Data/roads_lines_shp/
↪hotosm_zaf_roads_lines.shp')
sa_roads.plot()
```

[10]: <matplotlib.axes._subplots.AxesSubplot at 0x7f4240137590>



[11]:
```
sa_rivers = gpd.read_file('/content/drive/MyDrive/HonsProj-Data/All-rivers/
↪wriall500.shp')
```

```
sa_rivers.plot()
```

[11]: <matplotlib.axes._subplots.AxesSubplot at 0x7f4234fd72d0>