```
import pandas as pd

import numpy as np

import matplotlib.pyplot as plt

from PIL import Image, ImageDraw


data_path = 'data.csv'

data = pd.read_csv(data_path, names=['LATITUDE', 'LONGITUDE'],
sep=',')



gps_data = tuple(zip(data['LATITUDE'].values,
data['LONGITUDE'].values))


image = Image.open('map.png', 'r')  # Load map image.

img_points = []

for d in gps_data:

   x1, y1 = scale_to_img(d, (image.size[0], image.size[1]))  # Convert
GPS coordinates to image coordinates.

   img_points.append((x1, y1))

draw = ImageDraw.Draw(image)

draw.line(img_points, fill=(255, 0, 0), width=2)  # Draw converted
records to the map image.


image.save('resultMap.png')
```

```
x_ticks = map(lambda x: round(x, 4), np.linspace(lon1, lon2, num=7))
y_ticks = map(lambda x: round(x, 4), np.linspace(lat1, lat2, num=8))
y_ticks = sorted(y_ticks, reverse=True)  # y ticks must be reversed due to conversion to image coordinates.

fig, axis1 = plt.subplots(figsize=(10, 10))
axis1.imshow(plt.imread('resultMap.png'))  # Load the image to matplotlib plot.
axis1.set_xlabel('Longitude')
axis1.set_ylabel('Latitude')
axis1.set_xticklabels(x_ticks)
axis1.set_yticklabels(y_ticks)
axis1.grid()
plt.show()
```

```
import plotly.graph_objects as go

fig = go.Figure()

fig.add_trace(go.Indicator(
    value = 200,
```

```
    delta = {'reference': 160},
    gauge = {
        'axis': {'visible': False}},
    domain = {'row': 0, 'column': 0}))

fig.add_trace(go.Indicator(
    value = 120,
    gauge = {
        'shape': "bullet",
        'axis' : {'visible': False}},
    domain = {'x': [0.05, 0.5], 'y': [0.15, 0.35]}))

fig.add_trace(go.Indicator(
    mode = "number+delta",
    value = 300,
    domain = {'row': 0, 'column': 1}))

fig.add_trace(go.Indicator(
    mode = "delta",
    value = 40,
    domain = {'row': 1, 'column': 1}))

fig.update_layout(
    grid = {'rows': 2, 'columns': 2, 'pattern': "independent"},
```

```
template = {'data' : {'indicator': [{
    'title': {'text': "Speed"},
    'mode' : "number+delta+gauge",
    'delta' : {'reference': 90}}]
                    }})
```