Plotly Scatter objects

A Scatter object is also called a trace.

`(x,y)` values can be specified as two lists like:

```
poly = go.Scatter(x=[0,1,1],y=[1,0,1])
```

or

```
X = [0,1,1]
Y = [1,0,1]
poly = go.Scatter(x=X,y=Y)
```

code:

```
import plotly.graph_objects as go

poly = go.Scatter(x=[0,1,1],y=[1,0,1])
fig = go.Figure(poly)
fig.show()
```

This results in the three points plotted with lines connecting the first two.

`print(poly)` gives:

```
Scatter({
    'x': [0, 1, 1], 'y': [1, 0, 1]
})
```

To draw then entire triangle, add the first point at the end.

The default color is blue, with fairly small points and line widths. To change the line properties do either:

```
line={'color':'black', 'width':10})
line=dict(color='black',width=10)
```

This also changes the color of the vertices to black.

Vertices are called markers.

```
marker={'size':40, 'color':'blue'}
```

to color individually:

```
dict(size=[40, 60, 80],
     color=[0, 1, 2])
```

To toggle the markers off/on in the default:

```
mode='lines'
mode='lines+markers'
```

For marker symbols see here

Fill is a bit complicated. There are a number of possible values.

```
"none" | "tozeroy" | "tozerox" | "tonexty" |
"tonextx" | "toself" | "tonext"
```

https://plotly.com/python/reference/#scatter-fill

```
fill='toself', fillcolor='salmon',
```

To add a second trace to a figure do:

```
fig.add_trace(poly2)
```

final code:

```
import plotly.graph_objects as go

poly = go.Scatter(
    x=[0,1,1,0],y=[1,0,1,1],
    line={'color':'black', 'width':3},
    marker={'size':10, 'color':'red'},
    mode='lines+markers',
    fill='toself', fillcolor='salmon')

fig = go.Figure(poly)
fig.show()
```

To do: what is scattergeo