# BASIC CHARTS

**Line Plots**

```python
trace1 = go.Scatter (  
    x = [1, 2], y = [1, 2]  
) 
trace2 = go.Scatter (  
    x = [1, 2], y = [2, 1]  
) 
py.iplot ([trace1, trace2])
```

**Bubble Charts**

```python
trace = go.Scatter (  
    x = [1, 2, 3], y = [1, 2, 3],  
    marker = dict (  
        color = ['red', 'blue', 'green']  
    )  
) 
py.iplot ([trace])
```

**Scatter Plots**

```python
trace1 = go.Scatter (  
    x = [1, 2, 3], y = [1, 2, 3],  
    text=['A','B','C'],  
    textposition='top center',  
    mode = 'markers+text'  
) 
py.iplot ([trace1])
```

**Heatmaps**

```python
trace = go.Heatmap (  
    z = [[1, 2, 3, 4],  
         [5, 6, 7, 8]]  
) 
py.iplot ([trace])
```

**Bar Charts**

```python
trace = go.Bar (  
    x = [1, 2], y = [1, 2]  
) 
py.iplot ([trace])
```

**Area Plots**

```python
trace = go.Scatter (  
    x = [1, 2], y = [1, 2],  
    fill='tonexty'  
) 
py.iplot ([trace])
```

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# LAYOUT

**Legends**

```python
trace1 = go.Scatter (  
    name = 'Calvin'  
) 
py.iplot ([trace1])
```

```python
trace2 = go.Scatter (  
    name = 'Hobbes'  
) 
py.iplot ([trace2])
```

**Axes**

```python
trace = go.Scatter (  
    x = [1, 2, 3, 4],  
    y = [1, 2, 3, 6]  
) 
py.iplot ([trace])
```

```python
fig = go.Figure (  
    data = data  
) 
py.iplot ([fig])
```

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**Getting Started**

1. Install
   ```bash
   sudo pip install plotly
   ```

2. Sign Up & Configure
   ```bash
   http://www.plot.ly/python/getting-started
   ```

3. Boilerplate Imports
   ```python
   import plotly.plotly as py
   import plotly.graph_objs as go
   ```

4. A Hello World Figure
   ```python
   trace = { 'x': [1, 2], 'y': [1, 2] } 
   data = [trace] 
   layout = {} 
   fig = go.Figure (  
       data = data, layout = layout 
   ) 
   py.iplot (fig)
   ```

5. Plot the Figure!
   ```python
   In the terminal:  
   plot_url = py.plot ( fig )
   Or in the IPython notebook:  
   py.iplot (fig)
   ```
```python
trace = go.Histogram(
    x = [1, 2, 3, 3, 4, 5],
data = [trace]
)py.iplot(data)
```

```python
trace = dict(
type = 'scattergeo',lon = [100, 400], lat = [0, 0],
marker = dict(
    color = 'red', 'blue'
size = [30, 50],
mode = 'markers')py.iplot([trace])
```

```python
trace = go.Box(
x = [1, 2, 3, 3, 4, 5]
data = [trace]
)py.iplot(data)
```

```python
trace = go.Histogram2d(
x = [1, 2, 3, 3, 4, 5],y = [1, 2, 3, 3, 4, 5]
data = [trace]
)py.iplot(data)
```

```python
trace = go.Scatter3d(
x = [9, 8, 5, 1], y = [1, 2, 4, 8],
z = [11, 8, 15, 3],
mode = 'markers')py.iplot(data)
```

```python
trace = go.Scatter3d(
x = [9, 8, 5, 1], y = [1, 2, 4, 8],z = [11, 8, 15, 3],
mode = 'markers')py.iplot(data)
```

```python
trace = go.Surface(
colorscale = 'Viridis',
z = [[3, 5, 8, 13],
[21, 13, 8, 5]]data = [trace]
)py.iplot(data)
```

```python
trace = go.Scatter3d(
x = [9, 8, 5, 1], y = [1, 2, 4, 8],
z = [11, 8, 15, 3],
mode = 'markers')py.iplot(data)
```

```python
trace = go.Surface(
colorscale = 'Viridis',
z = [[3, 5, 8, 13],
[21, 13, 8, 5]]data = [trace]
)py.iplot(data)
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```python
trace = go.Scatter3d(
x = [9, 8, 5, 1], y = [1, 2, 4, 8],
z = [11, 8, 15, 3],
mode = 'markers')py.iplot(data)
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trace = go.Scatter3d(
x = [9, 8, 5, 1], y = [1, 2, 4, 8],
z = [11, 8, 15, 3],
mode = 'markers')py.iplot(data)
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```python
trace = go.Scatter3d(
x = [9, 8, 5, 1], y = [1, 2, 4, 8],
z = [11, 8, 15, 3],
mode = 'markers')py.iplot(data)
```