Haberman 3d Scatter plot

October 14, 2018

In [1]:
```
import plotly
#import plotly.plotly as py
plotly.tools.set_credentials_file(username='aavinashmeher', api_key='366DaNYkoBF3h8tKd4
import plotly.plotly as py
import plotly.graph_objs as go
import pandas as pd
df = pd.read_csv("haberman.csv", header=None,
                         names=['age', 'operation_year', 'axil_nodes', 'surv_status_after
```

In [2]:
```
df.head()

data = []
clusters = []
colors = ['rgb(228,26,28)','rgb(55,126,184)','rgb(77,175,74)']

for i in range(len(df['surv_status_after_5yrs'].unique())):
    name = df['surv_status_after_5yrs'].unique()[i]
    color = colors[i]
    age = df[ df['surv_status_after_5yrs'] == name ]['age']
    operation_year = df[ df['surv_status_after_5yrs'] == name ]['operation_year']
    axil_nodes = df[ df['surv_status_after_5yrs'] == name ]['axil_nodes']

    trace = dict(
        name = name,
        x = age, y = operation_year, z = axil_nodes,
        type = "scatter3d",
        mode = 'markers',
        marker = dict( size=3, color=color, line=dict(width=0) ) )
    data.append( trace )
```

In [5]:
```
layout = dict(
    width=800,
    height=550,
    autosize=False,
    title='Haberman dataset',
    scene=dict(
        xaxis=dict(
```

```
                    title='Age of Patient',
                    gridcolor='rgb(255, 255, 255)',
                    zerolinecolor='rgb(255, 255, 255)',
                    showbackground=True,
                    backgroundcolor='rgb(230, 230,230)'
                ),
                yaxis=dict(
                    title='Year of operation',
                    gridcolor='rgb(255, 255, 255)',
                    zerolinecolor='rgb(255, 255, 255)',
                    showbackground=True,
                    backgroundcolor='rgb(230, 230,230)'
                ),
                zaxis=dict(
                    title='No. of axil nodes',
                    gridcolor='rgb(255, 255, 255)',
                    zerolinecolor='rgb(255, 255, 255)',
                    showbackground=True,
                    backgroundcolor='rgb(230, 230,230)'
                ),
                aspectratio = dict( x=1, y=1, z=0.7 ),
                aspectmode = 'manual'
            ),
        )

        fig = dict(data=data, layout=layout)

        # IPython notebook
        py.iplot(fig, filename='pandas-3d-Haberman', validate=False)

        url = py.plot(fig, filename='pandas-3d-Haberman', validate=False)
```

Out[5]: <plotly.tools.PlotlyDisplay object>