**Cheat Sheet: Plotly and Dash**

| Function | Description | Syntax | Example |
|---|---|---|---|
| Plotly Express | | | |
| scatter | Create a scatter plot | px.scatter(dataframe, x=x_column, y=y_column) | px.scatter(df, x=age_array, y=income_array) |
| line | Create a line plot | px.line( x=x_column, y=y_column, 'title') | px.line(x=months_array, y=no_bicycle_sold_array) |
| bar | Create a bar plot | px.bar( x=x_column, y=y_column,title='title') | px.bar( x=grade_array, y=score_array, title='Pass Percentage') |
| sunburst | Create a sunburst plot | px.sunburst(dataframe, path=[col1,col2..], values='column',title='title') | px.sunburst(data, path=['Month', 'DestStateName'], values='Flights',title='Flight Distribution Hierarchy') |
| histogram | Create a histogram | px.histogram(x=x,title='title') | px.histogram(x=heights_array,title="Distribution of Heights") |
| bubble | Create a bubble chart | px.scatter(dataframe, x=x,y=y,size=size,title="title") | px.scatter(bub_data, x="City", y="Numberofcrimes", size="Numberofcrimes",hover_name="City", title='Crime Statistics') |
| pie | Create a pie chart | px.pie(values=x,names=y,title="title") | px.pie(values=exp_percent, names=house_hold_categories, title='Household Expenditure') |
| Plotly Graph Objects | | | |
| Scatter | Create a scatter | go.Scatter(x=x, y=y, mode='markers') | go.Scatter(x=age_array, y=income_array, mode='markers') |
| | Create a line plot | go.Scatter(x=x, y=y, mode='lines') | go.Bar(x=months_array, y=no_bicycle_sold_array,mode='lines') |
| add_trace | Add additional traces to an existing figure | fig.add_trace(trace_object) | fig.add_trace(go.Scatter(x=months_array, y=no_bicycle_sold_array)) |
| update_layout | Update the layout of a figure, such as title, axis labels, and annotations. | fig.update_layout(layout_object) | fig.update_layout(title='Bicycle Sales', xaxis_title='Months', yaxis_title='Number of Bicycles Sold') |
| Dash | | | |
| dash_core_components.Input | Create an input component | dcc.Input(value='', type='text') | dcc.Input(value='Hello', type='text') |
| dash_core_components.Graph | Create a graph component | dcc.Graph(figure=fig) | dcc.Graph(figure=fig) |
| dash_html_components.Div | Create a div element | html.Div(children=component_list) | html.Div(children=[html.H1('Hello Dash'), html.P('Welcome to Dash')]) |
| dash_core_components.Dropdown | Create a dropdown component | dcc.Dropdown(options=options_list, value=default_value) | dcc.Dropdown(options=[{'label': 'Option 1', 'value': '1'}, {'label': 'Option 2', 'value': '2'}], value='1') |

**Author(s)**

Dr. Pooja