



Data Visualization with Python

Cheat Sheet : Plotly and Dash

Function

Description Syntax

Example

Plotly Express

| | | | |
|------------------|------------------------|---|---|
| scatter | Create a scatter plot | <code>px.scatter(dataframe, x=x_column, y=y_column)</code> | <code>px.scatter(df, x=age_array, y=income_array)</code> |
| line | Create a line plot | <code>px.line(x=x_column, y=y_column, title='title')</code> | <code>px.line(x=months_array, y=no_bicycle_sold_array)</code> |
| bar | Create a bar plot | <code>px.bar(x=x_column, y=y_column, title='title')</code> | <code>px.bar(x=grade_array, y=score_array, title='Pass Percentage')</code> |
| sunburst | Create a sunburst plot | <code>px.sunburst(dataframe, path=[col1,col2..], values='column', title='title')</code> | <code>px.sunburst(data, path=['Month', 'DestStateName'], values='Flights', title='Flight Distribution Hierarchy')</code> |
| histogram | Create a histogram | <code>px.histogram(x=x, title="title")</code> | <code>px.histogram(x=heights_array, title="Distribution of Heights")</code> |
| bubble | Create a bubble chart | <code>px.scatter(dataframe, x=x, y=y, size=size, title="title")</code> | <code>px.scatter(bub_data, x="City", y="Numberofcrimes", size="Numberofcrimes", hover_name="City", title='Crime Statistics')</code> |
| pie | Create a pie chart | <code>px.pie(values=x, names=y, title="title")</code> | <code>px.pie(values=exp_percent, names=house_holdcategories, title='Household Expenditure')</code> |

Plotly Graph Objects

| | | | |
|----------------------|---|---|--|
| Scatter | Create a scatter plot | <code>go.Scatter(x=x, y=y, mode='markers')</code> | <code>go.Scatter(x=age_array, y=income_array, mode='markers')</code> |
| | Create a line plot | <code>go.Scatter(x=x, y=y, mode='lines')</code> | <code>go.Bar(x=months_array, y=no_bicycle_sold_array, mode='lines')</code> |
| add_trace | Add additional traces to an existing figure | <code>fig.add_trace(trace_object)</code> | <code>fig.add_trace(go.Scatter(x=months_array, y=no_bicycle_sold_array))</code> |
| update_layout | Update the layout of a figure, such as title, axis labels, and annotations. | <code>fig.update_layout(layout_object)</code> | <code>fig.update_layout(title='Bicycle Sales', xaxis_title='Months', yaxis_title='Number of Bicycles Sold')</code> |

Dash

| | | | |
|--------------------------------------|-----------------------------|--|--|
| dash_core_components.Input | Create an input component | <code>dcc.Input(value='', type='text')</code> | <code>dcc.Input(value='Hello', type='text')</code> |
| dash_core_components.Graph | Create a graph component | <code>dcc.Graph(figure=fig)</code> | <code>dcc.Graph(figure=fig)</code> |
| dash_html_components.Div | Create a div element | <code>html.Div(children=component_list)</code> | <code>html.Div(children=[html.H1('Hello Dash'), html.P('Welcome to Dash')])</code> |
| dash_core_components.Dropdown | Create a dropdown component | <code>dcc.Dropdown(options=options_list, value=default_value)</code> | <code>dcc.Dropdown(options=[{'label': 'Option 1', 'value': '1'}, {'label': 'Option 2', 'value': '2'}], value='1')</code> |

Author(s)

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Changelog

| Date | Version | Changed by | Change Description |
|------------|---------|------------|-------------------------|
| 2023-06-19 | 0.1 | Dr. Pooja | Initial version created |