



Data Visualization with Python

Cheat Sheet : Plotting with Matplotlib using Pandas

Plot Type	Description	Pandas Function
Line Plot	Shows trends and changes over time	<pre>DataFrame.plot.line() DataFrame.plot(kind = 'line')</pre>
Area Plot	Displays data series as filled areas, showing the relationship between them	<pre>DataFrame.plot.area() DataFrame.plot(kind = 'area')</pre>
Histogram	Displays bars representing the data count in each interval/bin	<pre>Series.plot.hist() Series.plot(kind = 'hist', bins = n)</pre>
Bar Chart	Displays data using rectangular bars	<pre>DataFrame.plot.bar() DataFrame.plot(kind = 'bar')</pre>
Pie Chart	Displays data as a circular plot divided into slices, representing proportions or percentages of a whole	<pre>Series.plot.pie() Series.plot(kind = 'pie') DataFrame.plot.pie(v, labels) DataFrame.plot(kind = 'pie')</pre>
Box Plot	Displays the distribution of a dataset along with key statistical measures	<pre>DataFrame.plot.box() DataFrame.plot(kind = 'box')</pre>
Scatter Plot	Uses Cartesian coordinates to display values for two variables	<pre>DataFrame.plot.scatter() DataFrame.plot(x, y, kind = 'scatter')</pre>

Cheat Sheet : Plotting directly with Matplotlib

Plot Type	Description	Matplotlib Function
Line Plot	Shows trends and changes over time	<code>plt.plot()</code>
Area Plot	Display data series as filled areas	<code>plt.fill_between()</code>
Histogram	Displays bars representing the data count in each interval/bin	<code>plt.hist()</code>
Bar Chart	Displays data using rectangular bars	<code>plt.bar()</code>
Pie Chart	Displays data as a circular plot divided into slices, representing proportions or percentages of a whole	<code>plt.pie()</code>
Box Plot	Displays the distribution of a dataset along with key statistical measures	<code>plt.boxplot()</code>
Scatter Plot	Uses Cartesian coordinates to display values for two variables	<code>plt.scatter()</code>
Subplotting	Creating multiple plots on one figure	<code>plt.subplots()</code>
Customization	Customizing plot: adding labels, title, legend, grid	Various customization

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Changelog

Date	Version	Changed by	Change Description
2023-06-10	0.1	Dr. Pooja	Initial version created