Chapter 1

1.1 The definition of figure, plots, subplots, axes, ticks, and legends

In this diagram, the Figure is an element containing one or more than one axes or plots for visualization. An Axes can contain mostly one or more axes for rendering the plots. In some cases, it can have more than two axes to plot 3D elements and objects. Typically, each Axes has a combination of X-axis and Y-axis with a title, ticks, and label. Each axis handles the graph/plot limits that are rendered. Each axis has ticks to define the axes parameters. Finally, each plot is rendered through Artists tied to axes and render any text or visual objects rendered in a plot. Artist, like the name says, renders visual elements to a canvas. It takes care of the representation of figures, texts, axes, and lines on the canvas.
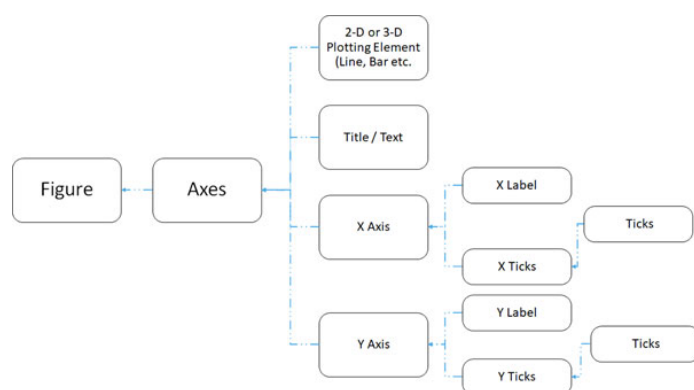
图 1.1: Matplotlib Plot – Architectural representation of a Python visualization interaction