**CHAPTER-1**

* **MATPLOTLIB:-IT IS A PYTHON PACKAGE FOR 2-D PLOTTING THAT GENERATED PRODUCTION-QULAITY GRAPHS.**
* IT PROVIDES A WIDE VARIETY OF GRAPHS.
* **Matplotlib tries to make easy things easy and hard things possible**

**-BY “JOHN HUNTER”**

* Matplotlib was modeled on MATLAB, because graphing was something that MATLAB did very well. The high degree of compatibility between them made many people move from MATLAB to Matplotlib, as they felt like home while working with Matplotlib
* MATPLOTLIB OUTPUT FORMATS:- **RASTER IMAGES,VECTOR IMAGES**
* JPG:-RASTER(The format of these images is like a matrix, with rows and columns, and at every matrix cell we have a pixel description (containing information such as colors). This format is said to be resolution-dependent, because the size of the matrix (the number of rows and columns) is determined when the image is created)
* PDF:-VECTOR(vector images contain a description of the image in the form of mathematical equations and geometrical primitives (for example, points, lines, curves, polygons, or shapes).
* A backend that displays the image on screen is called a user interface backend.
* In order to be even more flexible, Matplotlib introduces the following two layers structured (only for GUI output):

1. The renderer: This actually does the drawing
2. The canvas: This is the destination of the figure

**Build dependencies**

The following tools are needed if we're going to install Matplotlib from the source:

• Python: Currently, only Python 2.x is supported (no Python 3 yet)

• NumPy: Version 1.1 or higher

• libpng: Version 1.1 or higher is needed to load or save PNG images (Windows users can skip this requirement)

• FreeType: Version 1.4 or higher is needed for reading TrueType font files (Windows users can skip this requirement)

**CHAPTER-2**

**GETTING STARTED WITH MATPLOTLIB**

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* **PLOTS WITH MATPLOTLIB**
* **MULTILINE PLOTS**
* **GRIZ,AXES AND LABELS**
* **TITLE AND LEGENDS**
* **COMPLETE EXAMPLE**

**CHAPTER-3**

**Decorate Graphs with Plot Styles and Types**

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* **Markers and line styles**
* **Handling X and Y ticks**