Other types of plots

Spoken Tutorial Project
http://spoken-tutorial.org
National Mission on Education through ICT

http://sakshat.ac.in

Script: Thirumalesh H S

Narrator: Kiran Kishore

IIT Bombay

26 October 2015

Objectives

At the end of this tutorial, you will be able to -

Objectives

At the end of this tutorial, you will be able to -

- **Create scatter plot**

Objectives

At the end of this tutorial, you will be able to -

- **Create scatter plot**
- **Create log-log plots**

System Specifications

System Specifications

- **Ubuntu Linux 14.04**

System Specifications

- **Ubuntu Linux 14.04**
- **`Python 2.7.6`**

System Specifications

- **Ubuntu Linux 14.04**
- **`Python 2.7.6`**
- **`IPython 4.0.0`**

Pre-requisites

To practise this tutorial, you should know how to

- **run basic Python commands on the ipython console**

Pre-requisites

To practise this tutorial, you should know how to

- **run basic Python commands on the ipython console**
- **load data from files and plot data.**

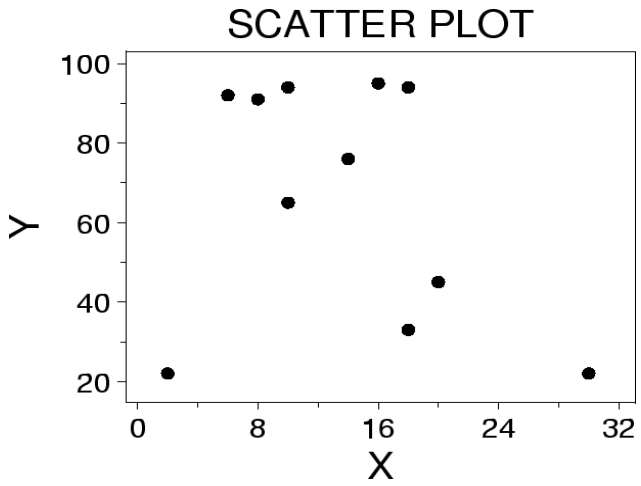
Pre-requisites

To practise this tutorial, you should know how to

- **run basic Python commands on the ipython console**
- **load data from files and plot data.**

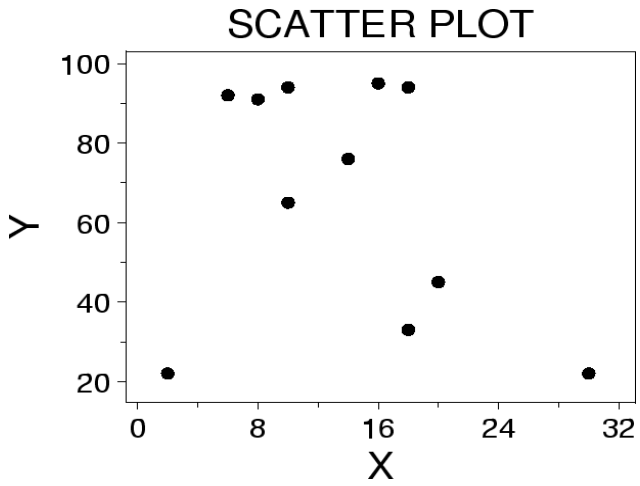
If not, see the pre-requisite Python tutorials on http://spoken-tutorial.org

Scatter Plot



- **In a scatter plot, the data is displayed as a collection of points.**

Scatter Plot



- In a scatter plot, the data is displayed as a collection of points.
- Each point determines it's position on the x and y axes.

Exercise 1

Plot a scatter plot showing the percentage profit of Company A from the year 2000 to 2010. The data for the same is available in the file 'company-a-data.txt'.

scatter() function

scatter() function is used to generate the scatter graph

scatter() function

scatter() function is used to generate the scatter graph

- **Syntax : `scatter(x,y)`**

scatter() function

scatter() function is used to generate the scatter graph

- **Syntax : `scatter(x,y)`**
  - **x - a sequence of data**

scatter() function

scatter() function is used to generate the scatter graph

- **Syntax : `scatter(x,y)`**
  - **x - a sequence of data**
  - **y - a sequence of data, the same length of x**

Exercise 2

- **Read the documentation of scatter and plot a scatter plot of the same data in 'company-a-data.txt' with red diamond markers.**

Log-log graph

- **Log-log graph is**
  - **two-dimensional graph of numerical data.**

Log-log graph

- **Log-log graph is**
  - **two-dimensional graph of numerical data.**
  - **it uses logarithmic scales on both axes.**

Log-log graph

- **Log-log graph is**
  - **two-dimensional graph of numerical data.**
  - **it uses logarithmic scales on both axes.**
  - **graph appears as straight line due to non-linear scaling.**

loglog()function

- **Syntax : `loglog(x, y)`**

loglog()function

- **Syntax : `loglog(x, y)`**
  - **`x` - a sequence of data**

loglog()function

- **Syntax : `loglog(x, y)`**
  - **`x` - a sequence of data**
  - **`y` - a sequence of data, the same length of `x`**

Exercise 3

Plot a log-log chart of $y = 5x^3$ for x from 1-20.

Summary

In this tutorial, we learnt to -

Summary

In this tutorial, we learnt to -

- Plot a scatter plot using `scatter()` function

Summary

In this tutorial, we learnt to -

- Plot a scatter plot using `scatter()` function
- Plot a log-log graph using `loglog()` function

Evaluation

1. `scatter(x, y, color='blue', marker='d')` and `plot(x, y,color='b', marker='d')` does exactly the same.
   - True
   - False

Solutions

1. **False**

Solutions

1. **False**

Forum to answer questions

- **Do you have questions in THIS Spoken Tutorial?**
- **Choose the minute and second where you have the question.**
- **Explain your question briefly.**
- **Someone from the FOSSEE team will answer them. Please visit**

http://forums.spoken-tutorial.org/

Forum to answer questions

- **Questions not related to the Spoken Tutorial?**
- **Do you have general / technical questions on the Software?**
- **Please visit the FOSSEE Forum**

  http://forums.fossee.in/
- **Choose the Software and post your question.**

Textbook Companion Project

- **The FOSSEE team coordinates coding of solved examples of popular books**
- **We give honorarium and certificate to those who do this**

For more details, please visit this site:

http://tbc-python.fossee.in/

Acknowledgements

- Spoken Tutorial Project is a part of the Talk to a Teacher project
- It is supported by the National Mission on Education through ICT, MHRD, Government of India
- More information on this Mission is available at: http://spoken-tutorial.org/NMEICT-Intro

THANK YOU!

For more Information, visit our website
http://fossee.in/