

Plotting Bar Charts and Scatter Plot

Spoken Tutorial Project

<https://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in/>

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**IIT Bombay
8 April 2019**



Learning Objectives

We will learn how to:



Learning Objectives

We will learn how to:

- ▶ Plot bar charts



Learning Objectives

We will learn how to:

- ▶ **Plot bar charts**
- ▶ **Plot scatter plot**



Learning Objectives

We will learn how to:

- ▶ **Plot bar charts**
- ▶ **Plot scatter plot**
- ▶ **Find the correlation coefficient between two objects**



Pre-requisites



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- ▶ **Data frames in R**



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- ▶ **Data frames in R**
- ▶ **Basics of Statistics**



Pre-requisites

- ▶ Data frames in R
- ▶ Basics of Statistics

Please locate the relevant tutorials on
<https://spoken-tutorial.org/>



System Specifications



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- ▶ **Ubuntu Linux OS v 16.04**



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- ▶ **R v 3.4.4**



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- ▶ **RStudio v 1.1.463**



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- ▶ **Ubuntu Linux OS v 16.04**
- ▶ **R v 3.4.4**
- ▶ **RStudio v 1.1.463**

R version 3.2.0 or higher



Download Files

We will use:



Download Files

We will use:

- ▶ A data frame **moviesData.csv**



Download Files

We will use:

- ▶ A data frame `moviesData.csv`
- ▶ A script file `barPlots.R`



Download Files

We will use:

- ▶ A data frame [moviesData.csv](#)
- ▶ A script file [barPlots.R](#)

Download these files from the [Code files](#) link of this tutorial



Bar Chart



Bar Chart

- ▶ **A bar chart represents data in rectangular bars with length of the bar proportional to the value of the variable**



Bar Chart

- ▶ A bar chart represents data in rectangular bars with length of the bar proportional to the value of the variable
- ▶ R uses the function `barplot` to create bar charts



Scatter Plot



Scatter Plot

- ▶ **Scatter plot is a graph in which the values of two variables are plotted along two axes**



Scatter Plot

- ▶ **Scatter plot is a graph in which the values of two variables are plotted along two axes**
- ▶ **The pattern of the resulting points reveals the correlation**



Summary

We have learnt how to:

- ▶ **Plot bar plot**
- ▶ **Plot scatter plot**
- ▶ **Find the correlation coefficient between two objects**



Assignment

1. Read the file *moviesData.csv*
Create a bar chart of *critics_score* for the first 10 movies
2. Create a scatter plot of *imdb_rating* and *imdb_num_votes* to see their relation
3. Save both the plots



About the Spoken Tutorial Project

- ▶ Watch the video available at http://spoken-tutorial.org/What_is_a_Spoken_Tutorial
- ▶ It summarises the Spoken Tutorial project
- ▶ If you do not have good bandwidth, you can download and watch it



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- ▶ Choose the Software and post your question



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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

- ▶ **The script for this tutorial was contributed by Tushar Bajaj (TISS Mumbai)**
- ▶ **The video has been created by Sudhakar Kumar, IIT Bombay**

