COMP3008 - Big Data Analytics

Workshop 6 - Data Visualisation Part 1

2026-01-23

This worksheet is designed to give you an introduction to creating visualisations in R. R is a programming language for statistical computing and data visualization. It has been adopted in the fields of data mining, bioinformatics, and data analysis.

Like Python, R uses libraries of functions to carry out tasks which can be imported as follows:

```r
library(readr) # Loads in the library readr
```

In this workshop we will be using the IMDB database (`imbd_top_1000_movies.csv`) and only the plotting functions with R. We bring the data into your environment using the code below:

```r
IMDB_data<-read_csv("imdb_top_1000_movies.csv")
```

```
## Rows: 1000 Columns: 13
## -- Column specification ------------------------------------------------
## Delimiter: ","
## chr (11): Title, Released_Year, Certificate, Runtime, Genre, Overview, Direc...
## dbl  (2): IMDB_Rating, Meta_score
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```
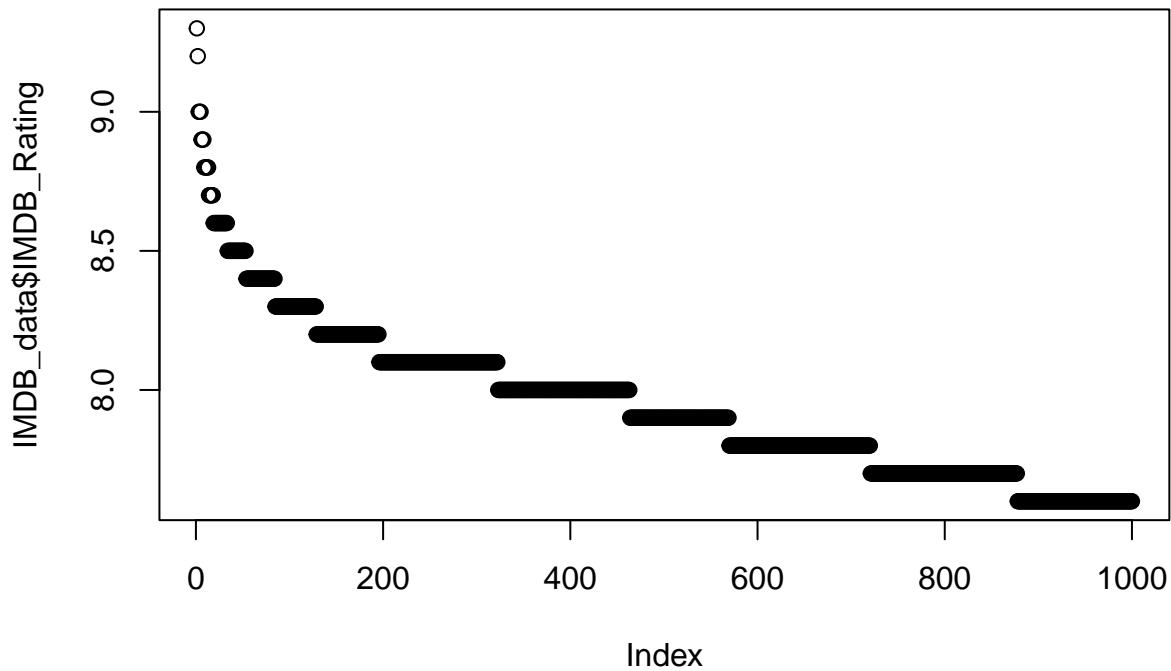
Once the data is loaded in, you can use the functions `head` and `tail` to view the first and last 6 rows of data to ensure it has been loaded in correctly.

Exercise 1

As a statistical software, R can produce a number of different types of plots without the need for external libraries.

The first exercise is to use the `plot()` function with just the IMDB Rating column.
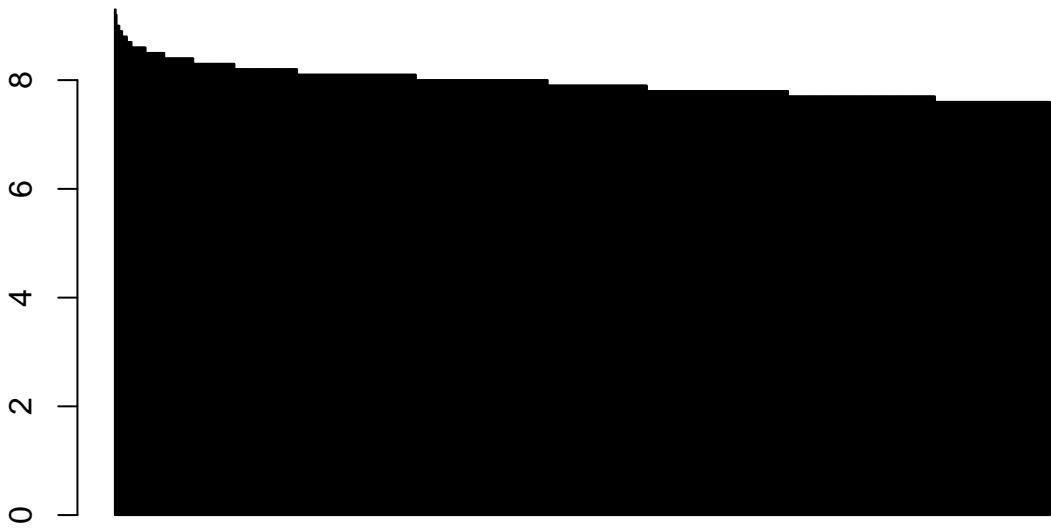
You should end up with the following:

Not the most intuitive plot.

Exercise 2

We can specify which particular type of plot we want R to make by using the plot name. Recreate the plot below using the `barplot()` function and the IMDB Rating variable.

Exercise 3

Basic plotting in R has a simple syntax, you can find a cheatsheet for basic plotting here.

Using the IMBD data and the base R plotting functions, create the most hideous, misleading plot you can. If you wish to submit your wonderful creation, and I will show case your wonderful creations.