

## Chapter 2

# Introduction to Programming R and Python Languages

### INTRODUCTION

This chapter introduces the basic concepts of using the languages we propose to approach the data analysis tasks. Thus, we first introduce some features of R and then we also present some necessary features of Python. We stress that we do not cover all features of both languages but the essential characteristics that the reader has to be aware of to progress in further stages of this book.

### TOOLS

As previously stated, besides focusing on the statistical tasks later in this book, we will provide practice procedures and examples in both R and Python languages. There are many information sources about these languages. We will state a brief summary of both languages characteristics. We will start with R language. If the reader needs information for Python we make it available further in this chapter.

# R

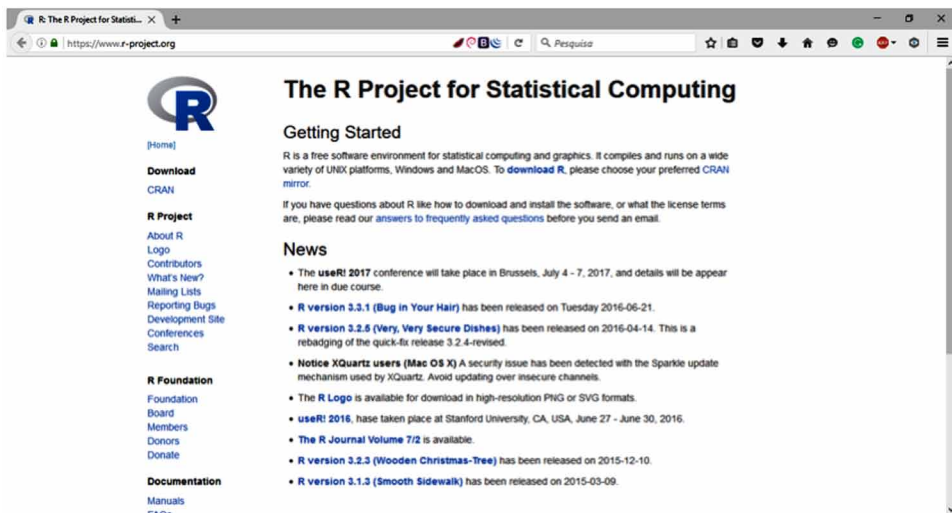
R is a powerful programming language, used in statistical tasks, data analysis, numerical analysis and others. The main characteristics of R are:

- Powerful,
- Stable,
- Free,
- Programmable,
- Open Source Software,
- Directed to the Visualization of Data.

On the downside, R might not be initially suitable for everyone since it needs user inputs on the command line. We will deal with this in this chapter to make the reader's life easier.

First, the reader will need to install R for his/her operating system (OS). R is available for Mac, Windows, and Linux on a website. Figure 1 shows an overview of the website to download R.

Figure 1. Overview of the website to download R



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