



Data Science

Role in Industry 4.0

President University

Pre-Workshop Guide

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Introduction

This guide is a resource for participants at Data Science Role in Industry 4.0 to use in setting up their laptop or environment prior to the scheduled workshops. In this guide, participants can find a list of prerequisites that will be consistently used throughout the entire course. These prerequisites are required to be **completed before** the start of the workshop.

For the participants, we will run through the installation process to ensure that the necessary programming languages and tools - such as R and RStudio- are installed.

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Installation

Installing R

Use this link: <http://cran.cnr.berkeley.edu/>

Installing RStudio IDE

Use this link: <https://www.rstudio.com/products/rstudio/download/>

Note: Make sure the versions downloaded are compatible with your operating system!

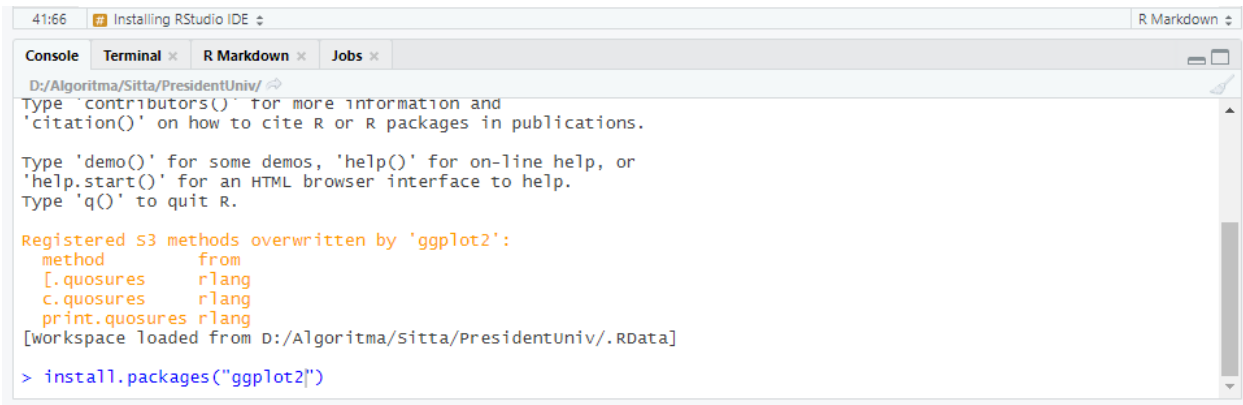
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Package Downloads

Downloading R packages can be done in the RStudio IDE in the “*Console*” box which is located on the bottom left-hand side of the screen. Simply type the command:

```
> install.packages("package_name")
```

whereas *package_name* refers to the name of the R package you would like to install.

A screenshot of the RStudio IDE's console window. The window title is "41:66 Installing RStudio IDE". The console shows the following text: "D:/Algoritma/Sitta/PresidentUniv/ Type 'contributors()' for more information and 'citation()' on how to cite R or R packages in publications. Type 'demo()' for some demos, 'help()' for on-line help, or 'help.start()' for an HTML browser interface to help. Type 'q()' to quit R. Registered S3 methods overwritten by 'ggplot2': method from [.quosures rlang c.quosures rlang print.quosures rlang [workspace loaded from D:/Algoritma/Sitta/PresidentUniv/.RData] > install.packages(\"ggplot2\")". The text is color-coded: orange for the registered S3 methods message, blue for the command prompt, and black for the rest of the text.

```
41:66 Installing RStudio IDE R Markdown
Console Terminal R Markdown Jobs
D:/Algoritma/Sitta/PresidentUniv/
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.
Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.
Registered S3 methods overwritten by 'ggplot2':
method from
[.quosures rlang
c.quosures rlang
print.quosures rlang
[workspace loaded from D:/Algoritma/Sitta/PresidentUniv/.RData]
> install.packages("ggplot2")
```

Please install the following packages:

```
> install.packages("dplyr")
```

```
> install.packages("ggplot2")
```

```
> install.packages("ggrepel")
```

```
> install.packages("stringr")
```

Note: The quotation marks “” are part of the command so do not forget to include them.

