

# Module 2 - Data Handling and Exploration

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Welcome to QBAXXX, Module 2.

In this module we will pick up where we left off in module 1 and learn some cool tricks. The first step in starting any analysis work load is to discover what is in your hands. We will learn, (1) exploring data to discover how it lays, and (2) processing data to turn it into a format suitable for data analysis.

This module we will build upon some functionality we learned in Module 1 (import, data.frame, indexing) so it may be a good idea to refresh your mind if you are unclear about things.

There will be certain things you won't know from the start. Unless they prevent you from progressing, note them down and keep progressing. Most of it will become clear as you work through it. For the questions that you still are unclear about in the end, you can ask me during our virtual office hours.

This module's module is made up of X learning activities listed below. **BEFORE YOU START THE FOLLOWING ACTIVITIES, CREATE A PROJECT FOLDER FOR THIS MODULE AS DESCRIBED IN PVIOUS MODULE'S INTRODUCTION LEARNING ACTIVITY.**

## Learning Activities

- 1 - Descriptive Statistics [PDF](#), [HTML](#), [Rmd](#), Video : Descriptive statistics in R.
- 2 - Descriptive Visualizations [PDF](#), [HTML](#), [Rmd](#), Video : Some simple ways to visualize data.
- 3 - Subsetting and Aggregating [PDF](#), [HTML](#), [Rmd](#), Video : Creating subsets of data with R.
- 4 - Combining Datasets [PDF](#), [HTML](#), [Rmd](#), Video: Combining datasets.
- 5 - Common Transformations [PDF](#), [HTML](#), [Rmd](#), Video : An introduction to normalization, and some common transformations such as log, box-cox transformation.
- 6 - Missing Data and Imputations [PDF](#), [HTML](#), [Rmd](#), Video: Handling missing data.
- 7 - **Optional** Dimension Reduction [PDF](#), [HTML](#), [Rmd](#), Video: Optional module on using Principle Component Analysis for dimension reduction.

[Download Zip Archive for This Module's Learning Activities](#)

## Evaluation

[Assignment 2](#)