

**THE MUSTACHE ACADEMY  
OF TECHNOLOGY**

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**DATA**

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**SCIENCE**

**COURSE**

**BEGINNER**



# EXPLORE THE SYLLABUS

## 01. DATA SCIENCE FUNDAMENTALS

- Introduction to data science concepts and tools
- Getting started with RStudio
- Basic R Programming
- Using library and functions in R

## 02. DATA EXPLORATION – DESCRIBE THE PAST

- The seven steps of Exploratory Data Analysis
- Data cleaning and preparation
- Data visualisation using R package
- Exercise: Summarise key characteristics of a dataset using numerical and visual methods

## 03. BUILDING RECOMMENDATION SYSTEMS

- Concept and applications of recommendation systems
- Build a product recommendation engine using a retail dataset
- Finding interesting associations in a dataset
- Exercise: Modify a recommendation system to expand its applications into other areas of interest

## 04. MACHINE LEARNING – PREDICT THE FUTURE

- Introduction to predictive modeling
- Set up an eight-steps Machine Learning workflow using R
- Systemic approach to compare model performances and improve prediction accuracy
- Cluster Analysis: grouping similar objects or data points for real-world applications (e.g. customer segmentation)
- Exercise 1: Build models to predict house price (a regression problem)
- Exercise 2: Build models to predict if a customer is going to default on his/her credit card (a classification problem)

## 05. DATA PRODUCT DEVELOPMENT

- Turn data analyses into high quality reports (organising codes, outputs and text inside a single document)
- Make use of templates to save time on repetitive data analytic tasks (automated reporting)
- Step-by-step guide to establish a project workflow for your future data science tasks and study

**THANK YOU :)**

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