THE MUSTACHE ACADEMY of technology

HTTP://MTACHE.COM

info@mtache.com Tel: (+852) 3171 0914

Address: 18/F, TOWER 535, 535 Jaffe Road, Causeway Bay, Hong Kong

<section-header><section-header><text>

BEGINNER

COURSE OUTLINE (8 LESSONS)

This course covers the essential technical skills in data science. You will be working with real-world data using R, a popular programming language designed for data analytics and machine learning. This course also discusses techniques to work smart with data. You will learn how to set up a data science workflow with R that saves you time and let you bring more value in your everyday data analytic tasks.

Lesson (1.25 hours per lesson)	1	2	3	4	5	6	7	8
Data Science Fun- damentals								
Data Exploration (Describe the Past)								
Building Recom- mendation Systems								
Machine Learning (Predict the Future)								
Data Product De- velopment								

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 SYS-TEMS

- 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

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

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)

THANK YOU :)

THE MUSTACHE ACADEMY OF TECHNOLOGY

HTTP://MTACHE.COM info@mtache.com Tel: (+852) 3171 0914