Data Mining in R

Course Objectives

* How to configure the RStudio environment and load packages
* How to use R basics such as basic math, data types, vectors, and calling functions
* How to use advanced data structures such as data frames, lists, and matrices
* How to use R base graphic packages
* How to do exploratory data analysis
* How to use R to support basic statistics, correlation, and covariance
* How to use linear models such as linear regression and logistic regression
* How to use models such as decision trees, Random Forest, and K nearest neighbor
* How to use clustering models such as K-means

Course Structure

* Modules:
	+ Introduction to RStudio
	+ R Basics
	+ Introduction to Data Mining in R
	+ Classification and Clustering Models in R
	+ Summary

Module 1 Overview

* Topics:
	+ What is R?
	+ What is RStudio?
	+ Why use RStudio?
	+ Navigating RStudio
	+ What are packages?
	+ How to install packages
	+ Hands-on Exercises

Module 2 Overview

* Topics:
	+ R Math
	+ Data Types
	+ Working with Data
	+ Loading Data
	+ Writing Data
	+ Data Structures
	+ Hands-on Exercises

Module 3 Overview

* Topics:
	+ Overview of Data Mining and Data Science
	+ Exploratory Data Analysis
	+ Base Graphics in R
	+ Linear Regression
	+ Logistic Regression
	+ Hands-on Exercises

Module 4 Overview

* Topics:
	+ Decision Trees
	+ Clustering
	+ Model Diagnostics
	+ Hands-on Exercises

Module 5 – Summary

* Skills Review