ACADGILD

Session 2: Nearest Neighbor Classification

Assignment 1

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Assignment

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Machine Learning with R

1. Introduction

In this assignment, you will work with K-NN.

2. Objective

The objective of this course is to solve problems on K-NN.

3. Prerequisites

Not applicable.

4. Associated Data Files

Not applicable.

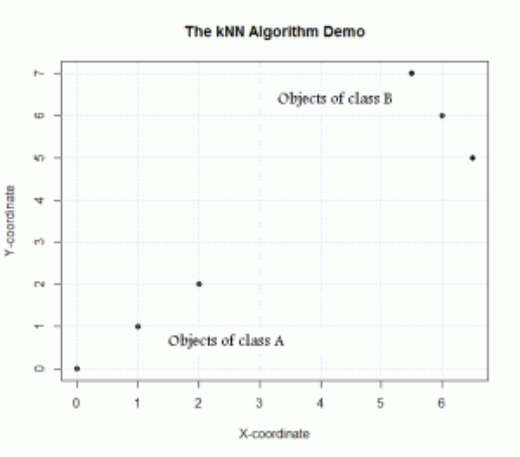
5. Problem Statement

Objects in classes A and B have two numeric attributes/properties that we map to X and Y Cartesian coordinates so that we can plot class instances (cases) as points on a 2-D chart. In other words, our cases are represented as points with X and Y coordinates (p(X,Y)).

Our simple classes A and B will have 3 object instances (cases) each.

Class A will include points with coordinates (0,0), (1,1), and (2,2).
Class B will include points with coordinates (6,6), (5.5, 7), and (6.5, 5).

Here is how the classification training objects for class A and class B are arranged on the chart



The object to be classified is (4,4)

Use KNN to classify the above object

Also test for (3.5, 3.5)

6. Expected Output

The objects are classified using K-NN.

7. Approximate Time to Complete Task