ITEC 3040 Assignment 2

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I have read and understood the Academic Honesty Statement specified in the course outline, and I have adhered fully at all time to the academic honesty rules and policies laid by the instructor, the School of Information Technology and York University Senate’s Academic Integrity Policy.

**Question 1 solution**

Text

Description automatically generated

---------------------------For Outlook---------------------------  
  
mdl =   
  
 ClassificationKNN  
 ResponseName: 'Y'  
 CategoricalPredictors: []  
 ClassNames: {'Overcast' 'Rainy' 'Sunny'}  
 ScoreTransform: 'none'  
 NumObservations: 14  
 Distance: 'euclidean'  
 NumNeighbors: 3  
  
  
  
label =  
  
 3×1 cell array  
  
 {'Sunny' }  
 {'Overcast'}  
 {'Overcast'}  
  
  
score =  
  
 0.33333 0 0.66667  
 0.33333 0.33333 0.33333  
 0.66667 0.33333 0  
  
  
cost =  
  
 0.66667 1 0.33333  
 0.66667 0.66667 0.66667  
 0.33333 0.66667 1  
  
---------------------------For Temperature---------------------------  
  
mdl =   
  
 ClassificationKNN  
 ResponseName: 'Y'  
 CategoricalPredictors: []  
 ClassNames: {'Cool' 'Hot' 'Mild'}  
 ScoreTransform: 'none'  
 NumObservations: 14  
 Distance: 'euclidean'  
 NumNeighbors: 3  
  
  
  
label =  
  
 3×1 cell array  
  
 {'Hot' }  
 {'Cool'}  
 {'Mild'}  
  
  
score =  
  
 0 1 0  
 0.66667 0 0.33333  
 0 0.33333 0.66667  
  
  
cost =  
  
 1 0 1  
 0.33333 1 0.66667  
 1 0.66667 0.33333  
  
---------------------------For Humidity---------------------------  
  
mdl =   
  
 ClassificationKNN  
 ResponseName: 'Y'  
 CategoricalPredictors: []  
 ClassNames: {'High' 'Normal'}  
 ScoreTransform: 'none'  
 NumObservations: 14  
 Distance: 'euclidean'  
 NumNeighbors: 3  
  
  
  
label =  
  
 3×1 cell array  
  
 {'High' }  
 {'Normal'}  
 {'High' }  
  
  
score =  
  
 1 0  
 0.33333 0.66667  
 0.66667 0.33333  
  
  
cost =  
  
 0 1  
 0.66667 0.33333  
 0.33333 0.66667  
  
---------------------------For Wind---------------------------  
  
mdl =   
  
 ClassificationKNN  
 ResponseName: 'Y'  
 CategoricalPredictors: []  
 ClassNames: {'Strong' 'Weak'}  
 ScoreTransform: 'none'  
 NumObservations: 14  
 Distance: 'euclidean'  
 NumNeighbors: 3  
  
  
  
label =  
  
 3×1 cell array  
  
 {'Weak' }  
 {'Strong'}  
 {'Strong'}  
  
  
score =  
  
 0.33333 0.66667  
 0.66667 0.33333  
 0.66667 0.33333  
  
  
cost =  
  
 0.66667 0.33333  
 0.33333 0.66667  
 0.33333 0.66667

**Question 2 solution**

Graphical user interface, text, application

Description automatically generated

y=1912.57+(-3.35)x  
The correlation "r" of the data is -0.909744

Chart, scatter chart

Description automatically generated