

Covid-19

Classification

do i have covid 19?

mahdiehyazdi801@gmail.com

Student:

Mahdieh yazdi

Student.id:

40012920005

Course:

Machin Learning

Teacher:

Dr.Farzin Yaghmaee , Mr.Amir shokri

Abstract

This is a Covid-19 Data Set, It contains 23 attributes including age. The response is to guess if a person has covid-19 or not.

1.Data

#:id
age
Sleep_problems
Headache
Diarrhea
Abdominal_pain
body_pain
Body_discoloration
Cough
Fever
Ague
Sore_throat
Fatigue
runny_nose
Chest_pain
Decreased_appetite
Vomit
Nausea
Sneezing
Shortness_of_breath
Loss_of_smell
Loss_of_taste
Urticaria

2.Feature

This is a binary data set, except for two age attributes for the age of people with Covid 19 and #, which number the rows, both of which were not required to work with the dataset, so both of these columns were removed from the attribute

3.Models

The documentation uses the Find-s, C-E, Naïve Bayes , KNN algorithm, K - Means clustering, Decision Tree, ID3; details are as follows:

3.1.Find-S

By running this algorithm the result includes 21 "?" It will be and we will have the most special result because the goal of all the samples is yes

3.2.CondidateElimination

The result of this algorithm in the Specific section is equal to 21 "?" And in the General section it is equal to 21 "?" And this can not be a good and acceptable result.

3.3.Naive Bayes

The accuracy of this algorithm is equal to 1 because the result of all samples

is yes and this result is not satisfactory.

3.4.K-NN

Best test score is 1.0 and K = 1.0

Best train score is 1.0 and K = 1.0

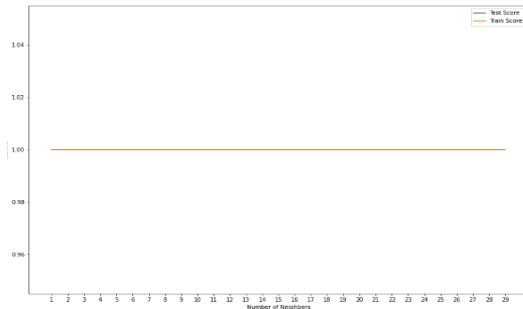


Figure 1:train score

3.5.K-Means

KMeans Algorithm result :

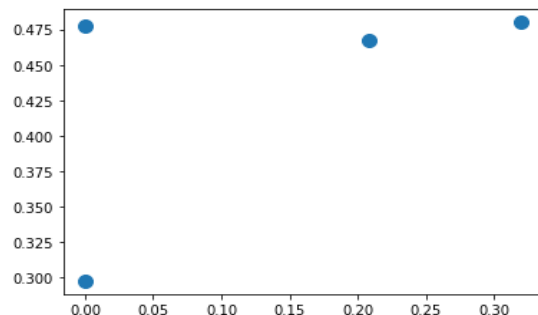
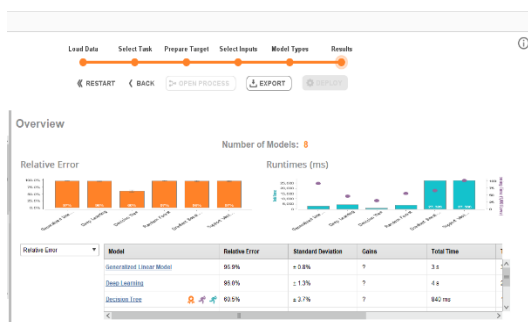


Figure 2:KMeans

And the result in rapidminer:



3.6. Decision Tree

The accuracy of this algorithm is equal to 1 because the result of all samples

4.Result

According to the decision tree, the result of all algorithms is equal to 1 because the target of all samples is equal to yes.

5. Dicussion

I learned a lot by doing this exercise and reviewing coding in Python and the Google colab environment.

6. References

<https://www.kaggle.com/amirshn11/covid-patient-datasets>

<https://www.analyticsvidhya.com/blog/2017/09/common-machine-learning-algorithms/>

<https://www.kaggle.com/sharmasantosh/exploratory-study-on-ml-algorithms>