

Ruleset

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# - Species should be one of the following values:
setosa, versicolor or virginica.
import numpy as np
def checkSpecies(data):
    arr1=np.array(data['Species'].value_counts().index)
    count=0
    for i in arr1:
        if i not in ['setosa','versicolor','virginica']:
            count+=1
    return count,'ruleset 1'

# - All measured numerical properties of an iris
should be positive.
def check_num(data):
    count=0
    for i in data.columns:
        if data[i].dtypes == "float64":
            if data[data[i]<0].shape[0]>0:
                count=count+1
    return count, "ruleset 2"

# - The petal length of an iris is at least 2 times
its petal width.
def checkPetalLength(data):
    count=0
    for i in range(len(data)):
        if(data.loc[i]['Petal.Length']<
2*(data.loc[i]['Petal.Width'])):
            count+=1
    return count,'ruleset 3'

# - The sepal length of an iris cannot exceed 30 cm.
def checkSepalLength(data):
    count=(data['Sepal.Length']>30).sum()
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return count, 'ruleset 4'

# - The sepals of an iris are longer than its petals.
def checkSepals(data):
    count=((data['Sepal.Length']+data['Sepal.Width'])<
(data['Petal.Length']+data['Petal.Width'])).sum()
    return count, 'ruleset 5'
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