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KNN---KNeighborsClassifier(algorithm='auto', leaf\_size=30, metric='minkowski',

metric\_params=None, n\_jobs=1, n\_neighbors=5, p=2,

weights='uniform')

--Train Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.810344827586

----------confusion\_matrix ------------------------------------------------------------

[[ 0 22]

[ 0 94]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.00 0.00 0.00 22

2 0.81 1.00 0.90 94

avg / total 0.66 0.81 0.73 116

--Actual Test Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.717948717949

----------confusion\_matrix ------------------------------------------------------------

[[ 1 9]

[ 2 27]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.33 0.10 0.15 10

2 0.75 0.93 0.83 29

avg / total 0.64 0.72 0.66 39

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LR---LogisticRegression(C=1.0, class\_weight=None, dual=False, fit\_intercept=True,

intercept\_scaling=1, max\_iter=100, multi\_class='ovr', n\_jobs=1,

penalty='l2', random\_state=None, solver='liblinear', tol=0.0001,

verbose=0, warm\_start=False)

Coefficient:

[[ -2.52131267e-02 1.08031457e+00 2.42146173e-01 -3.37576022e-01

6.38297076e-01 2.76244298e-01 -5.60759721e-03 -4.61350616e-01

3.64758200e-01 -2.13352617e-01 5.68536946e-01 8.79371153e-01

-4.60520036e-01 -5.62055215e-01 -7.10449242e-04 1.69935988e-03

4.48038203e-01 4.50962651e-03 -5.95291775e-01]]

Intercept:

[-0.20891413]

--Train Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.887931034483

----------confusion\_matrix ------------------------------------------------------------

[[13 9]

[ 4 90]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.76 0.59 0.67 22

2 0.91 0.96 0.93 94

avg / total 0.88 0.89 0.88 116

--Actual Test Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.820512820513

----------confusion\_matrix ------------------------------------------------------------

[[ 4 6]

[ 1 28]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.80 0.40 0.53 10

2 0.82 0.97 0.89 29

avg / total 0.82 0.82 0.80 39

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---------------------------------------------------------------------------------------

LDA---LinearDiscriminantAnalysis(n\_components=None, priors=None, shrinkage=None,

solver='svd', store\_covariance=False, tol=0.0001)

--Train Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.887931034483

----------confusion\_matrix ------------------------------------------------------------

[[15 7]

[ 6 88]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.71 0.68 0.70 22

2 0.93 0.94 0.93 94

avg / total 0.89 0.89 0.89 116

--Actual Test Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.794871794872

----------confusion\_matrix ------------------------------------------------------------

[[ 5 5]

[ 3 26]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.62 0.50 0.56 10

2 0.84 0.90 0.87 29

avg / total 0.78 0.79 0.79 39

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---------------------------------------------------------------------------------------

CART\_ENTROPY---DecisionTreeClassifier(class\_weight=None, criterion='entropy', max\_depth=3,

max\_features=None, max\_leaf\_nodes=None,

min\_impurity\_decrease=0.0, min\_impurity\_split=None,

min\_samples\_leaf=5, min\_samples\_split=2,

min\_weight\_fraction\_leaf=0.0, presort=False, random\_state=100,

splitter='best')

--Train Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.887931034483

----------confusion\_matrix ------------------------------------------------------------

[[14 8]

[ 5 89]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.74 0.64 0.68 22

2 0.92 0.95 0.93 94

avg / total 0.88 0.89 0.88 116

--Actual Test Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.769230769231

----------confusion\_matrix ------------------------------------------------------------

[[ 2 8]

[ 1 28]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.67 0.20 0.31 10

2 0.78 0.97 0.86 29

avg / total 0.75 0.77 0.72 39

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CART\_GINI---DecisionTreeClassifier(class\_weight=None, criterion='gini', max\_depth=3,

max\_features=None, max\_leaf\_nodes=None,

min\_impurity\_decrease=0.0, min\_impurity\_split=None,

min\_samples\_leaf=5, min\_samples\_split=2,

min\_weight\_fraction\_leaf=0.0, presort=False, random\_state=100,

splitter='best')

--Train Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.905172413793

----------confusion\_matrix ------------------------------------------------------------

[[14 8]

[ 3 91]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.82 0.64 0.72 22

2 0.92 0.97 0.94 94

avg / total 0.90 0.91 0.90 116

--Actual Test Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.666666666667

----------confusion\_matrix ------------------------------------------------------------

[[ 2 8]

[ 5 24]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.29 0.20 0.24 10

2 0.75 0.83 0.79 29

avg / total 0.63 0.67 0.65 39

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NB---GaussianNB(priors=None)

--Train Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.775862068966

----------confusion\_matrix ------------------------------------------------------------

[[19 3]

[23 71]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.45 0.86 0.59 22

2 0.96 0.76 0.85 94

avg / total 0.86 0.78 0.80 116

--Actual Test Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.769230769231

----------confusion\_matrix ------------------------------------------------------------

[[ 8 2]

[ 7 22]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.53 0.80 0.64 10

2 0.92 0.76 0.83 29

avg / total 0.82 0.77 0.78 39

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SVM---SVC(C=1.0, cache\_size=200, class\_weight=None, coef0=0.0,

decision\_function\_shape='ovr', degree=3, gamma='auto', kernel='rbf',

max\_iter=-1, probability=False, random\_state=None, shrinking=True,

tol=0.001, verbose=False)

--Train Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

1.0

----------confusion\_matrix ------------------------------------------------------------

[[22 0]

[ 0 94]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 1.00 1.00 1.00 22

2 1.00 1.00 1.00 94

avg / total 1.00 1.00 1.00 116

--Actual Test Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.74358974359

----------confusion\_matrix ------------------------------------------------------------

[[ 0 10]

[ 0 29]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.00 0.00 0.00 10

2 0.74 1.00 0.85 29

avg / total 0.55 0.74 0.63 39

---------------------------------------------------------------------------------------

---------------------------------------------------------------------------------------

RFC---RandomForestClassifier(bootstrap=True, class\_weight=None, criterion='gini',

max\_depth=None, max\_features='auto', max\_leaf\_nodes=None,

min\_impurity\_decrease=0.0, min\_impurity\_split=None,

min\_samples\_leaf=1, min\_samples\_split=2,

min\_weight\_fraction\_leaf=0.0, n\_estimators=10, n\_jobs=1,

oob\_score=False, random\_state=None, verbose=0,

warm\_start=False)

--Train Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.991379310345

----------confusion\_matrix ------------------------------------------------------------

[[22 0]

[ 1 93]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.96 1.00 0.98 22

2 1.00 0.99 0.99 94

avg / total 0.99 0.99 0.99 116

--Actual Test Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.820512820513

----------confusion\_matrix ------------------------------------------------------------

[[ 6 4]

[ 3 26]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.67 0.60 0.63 10

2 0.87 0.90 0.88 29

avg / total 0.82 0.82 0.82 39

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GBC---GradientBoostingClassifier(criterion='friedman\_mse', init=None,

learning\_rate=1.0, loss='deviance', max\_depth=1,

max\_features=None, max\_leaf\_nodes=None,

min\_impurity\_decrease=0.0, min\_impurity\_split=None,

min\_samples\_leaf=1, min\_samples\_split=2,

min\_weight\_fraction\_leaf=0.0, n\_estimators=100,

presort='auto', random\_state=0, subsample=1.0, verbose=0,

warm\_start=False)

--Train Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

1.0

----------confusion\_matrix ------------------------------------------------------------

E:\Users\mahesh\Anaconda3\lib\site-packages\sklearn\metrics\classification.py:1135: UndefinedMetricWarning: Precision and F-score are ill-defined and being set to 0.0 in labels with no predicted samples.

'precision', 'predicted', average, warn\_for)

E:\Users\mahesh\Anaconda3\lib\site-packages\sklearn\metrics\classification.py:1135: UndefinedMetricWarning: Precision and F-score are ill-defined and being set to 0.0 in labels with no predicted samples.

'precision', 'predicted', average, warn\_for)

[[22 0]

[ 0 94]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 1.00 1.00 1.00 22

2 1.00 1.00 1.00 94

avg / total 1.00 1.00 1.00 116

--Actual Test Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.692307692308

----------confusion\_matrix ------------------------------------------------------------

[[ 7 3]

[ 9 20]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

1 0.44 0.70 0.54 10

2 0.87 0.69 0.77 29

avg / total 0.76 0.69 0.71 39

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K---KMeans(algorithm='auto', copy\_x=True, init='k-means++', max\_iter=300,

n\_clusters=3, n\_init=10, n\_jobs=1, precompute\_distances='auto',

random\_state=0, tol=0.0001, verbose=0)

--Train Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.568965517241

----------confusion\_matrix ------------------------------------------------------------

[[ 0 0 0]

[ 6 3 13]

[20 11 63]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

0 0.00 0.00 0.00 0

1 0.21 0.14 0.17 22

2 0.83 0.67 0.74 94

avg / total 0.71 0.57 0.63 116

--Actual Test Set ---------------------------------------------------------------------------

----------accuracy\_score---------------------------------------------------------------

0.512820512821

----------confusion\_matrix ------------------------------------------------------------

[[ 0 0 0]

[ 5 0 5]

[ 7 2 20]]

----------classification\_report--------------------------------------------------------

precision recall f1-score support

0 0.00 0.00 0.00 0

1 0.00 0.00 0.00 10

2 0.80 0.69 0.74 29

avg / total 0.59 0.51 0.55 39

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