

[illegible]


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[48]: x=df[['age','contact','citytier','pitch','occupation','gender','personvisiting','followups','pitched','star'],

In [50]: from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test=train_test_split(x,y, test_size=0.25,random_state=2029)
x_train.shape,x_test.shape,y_train.shape,y_test.shape

Out[50]: ((1093, 18), (1032, 18), (3093,), (1032,))

In [51]: from sklearn.linear_model import LogisticRegression
lr=LogisticRegression()
lr.fit(x_train,y_train)
y_pred = lr.predict(x_test)

In [52]: from sklearn.metrics import confusion_matrix ,classification_report
print(confusion_matrix(y_test,y_pred))
print(classification_report(y_test,y_pred))

[[[849  0]
 [172 11]]

 precision    recall  f1-score   support

    0    0.83    1.00    0.91    849
    1    1.00    0.06    0.11    183

 accuracy    0.92    0.53    0.83   1032
 macro avg   0.92    0.53    0.51   1032
 weighted avg 0.86    0.83    0.77   1032

In [53]: from sklearn.ensemble import RandomForestClassifier
rfc=RandomForestClassifier()
rfc.fit(x_train,y_train)
rfc_pred=rfc.predict(x_test)

In [54]: from sklearn.metrics import confusion_matrix ,classification_report
print(confusion_matrix(y_test,rfc_pred))
print(classification_report(y_test,rfc_pred))

[[[841  8]
 [ 79 108]]

 precision    recall  f1-score   support

    0    0.92    0.99    0.95    849
    1    0.93    0.59    0.72    183

 accuracy    0.92    0.79    0.84   1032
 macro avg   0.92    0.79    0.84   1032
 weighted avg 0.92    0.92    0.91   1032

In [55]: from sklearn import tree
clf = tree.DecisionTreeClassifier()
clf.fit(x_train,y_train)
clf_pred=clf.predict(x_test)

In [59]: from sklearn.metrics import confusion_matrix ,classification_report
print(confusion_matrix(y_test,clf_pred))
print(classification_report(y_test,clf_pred))

[[[801 48]
 [ 50 133]]

 precision    recall  f1-score   support

    0    0.94    0.94    0.94    849
    1    0.73    0.73    0.73    183

 accuracy    0.84    0.84    0.84   1032
 macro avg   0.90    0.84    0.91   1032
 weighted avg 0.90    0.81    0.90   1032

In [59]: from sklearn.svm import SVC
svc=SVC()
svc.fit(x_train,y_train)
svc_pred=svc.predict(x_test)

In [60]: from sklearn.metrics import confusion_matrix ,classification_report
print(confusion_matrix(y_test,svc_pred))
print(classification_report(y_test,svc_pred))

[[[849  0]
 [183  0]]

 precision    recall  f1-score   support

    0    0.82    1.00    0.90    849
    1    0.00    0.00    0.00    183

 accuracy    0.41    0.50    0.82   1032
 macro avg   0.68    0.82    0.74   1032
 weighted avg 0.68    0.82    0.74   1032

In [61]: from sklearn.naive_bayes import GaussianNB
gnb = GaussianNB()
gnb.fit(x_train,y_train)
gnb_pred=gnb.predict(x_test)

In [62]: from sklearn.metrics import confusion_matrix ,classification_report
print(confusion_matrix(y_test, gnb_pred))
print(classification_report(y_test,gnb_pred))

[[[801 48]
 [112  71]]

 precision    recall  f1-score   support

    0    0.88    0.94    0.91    849
    1    0.60    0.39    0.47    183

 accuracy    0.74    0.67    0.69   1032
 macro avg   0.74    0.67    0.69   1032
 weighted avg 0.83    0.84    0.83   1032

In [ ]: 
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