Smote On Random Forest Classifier

Date	10 July 2024
Team ID	739749
Project Title	Sepsis Survival Minimal Clinical Records
Maximum Marks	5 Marks

```
[ ]  from imblearn.over_sampling import SMOTE
     from imblearn.under_sampling import RandomUnderSampler
     from imblearn.pipeline import Pipeline
     from sklearn.ensemble import RandomForestClassifier
```

```
[ ]  rus = RandomUnderSampler()
```

```
[ ]  smote = SMOTE(sampling_strategy='auto')
```

```
[ ]  rf_classifier = RandomForestClassifier()
```

```
[ ]  pipeline = Pipeline([
         ('somte', smote),
         ('rus',rus),
         ('rf',rf_classifier)
     ])
```

```
[ ]  pipeline.fit(x_train,y_train)
```

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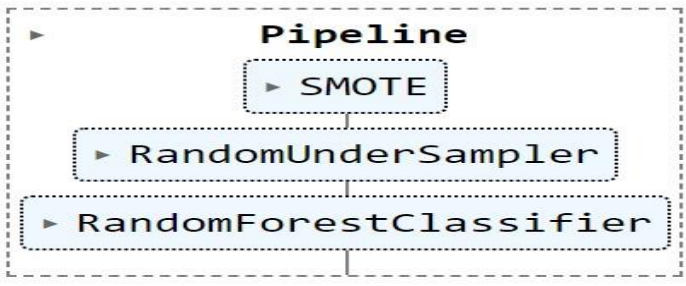
```
[ ]  pipeline.fit(x_train,y_train)
```




```
[ ]  y_pred1 = pipeline.predict(x_test)
```

```
[ ]  accuracy = accuracy_score(y_test,y_pred1)
     print("Accuracy:",accuracy)
```

```
Accuracy: 0.5511383482043629
```

```
[ ]  #evaluating model
     plt.figure(figsize=(5,5))
     sns.histplot(y_test_pred,bins=20,kde=True)
     plt.title("prediction error")
```

```
Text(0.5, 1.0, 'prediction error')
```