

Titanic- Machine Learning From Disaster

Editor: Kaggle

Compiler: Python IDE

Description:

This project aim is to predict whether the passengers survive or not from titanic shipwreck using machine learning algorithms. It is a part of Kaggle competition where we can submit the code for prediction, and it will rank us based on accuracy.

How to use:

1. Create a Kaggle account and join the titanic competition.
2. Click on new notebook to write the code.
3. Install all the python libraries.

```
import numpy as np
import pandas as pd
import plotly.express as px
import plotly.graph_objects as go
import seaborn as sns
import matplotlib.pyplot as plt
```

4. Write the code in notebook and run all in Kaggle's python IDE.
5. After executing save the output and submit in competition as .csv file
6. After submitting, I got accuracy of 0.78229 and my leaderboard ranking is 2466.

Sample Code:

```
import matplotlib.pyplot as plt
%matplotlib inline

def bar_chart(feature):
    Survived=train_data[train_data['Survived']==1][feature].value_counts()
    Dead=train_data[train_data['Survived']==0][feature].value_counts()
    df=pd.DataFrame([Survived,Dead])
    df.index=['Survived', 'Dead']
    df.plot(kind='bar',stacked=True,figsize=(5,5))
```

Output:

Upon implementing the Random Forest classifier the accuracy output resulted as:

Step 10: Implenting Random forest Classifier model

```
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test=train_test_split(x,y,test_size=0.33,random_state=42)
```

Python

```
from sklearn.ensemble import RandomForestClassifier
clr = RandomForestClassifier(max_depth=2, random_state=0)
clr.fit(x_train, y_train)
```

Python

```
RandomForestClassifier(max_depth=2, random_state=0)
```

```
clr.score(x_train,y_train)
```

Python

```
0.8149485772495756
```

```
clr.score(x_test,y_test)
```

Python

```
0.7903780668728522
```