SUV

July 6, 2024

1 SUV Predictions

- A car company has released a new SUV in the market. Using the previous data about the sales of their SUV's, they want to predict the category of who might be interested in buying this.
- What factors made people more interested in buying SUV?

[15]:
```
import pandas as pd
import numpy as np
import matplotlib as plt
%matplotlib inline

data = pd.read_csv("suv_data.csv")
```

[16]:
```
data.head(10)
```

[16]:

	User ID	Gender	Age	EstimatedSalary	Purchased
0	15624510	Male	19	19000	0
1	15810944	Male	35	20000	0
2	15668575	Female	26	43000	0
3	15603246	Female	27	57000	0
4	15804002	Male	19	76000	0
5	15728773	Male	27	58000	0
6	15598044	Female	27	84000	0
7	15694829	Female	32	150000	1
8	15600575	Male	25	33000	0
9	15727311	Female	35	65000	0

[17]:
```
data.shape
```

[17]:
```
(400, 5)
```

[18]:
```
X = data.iloc[:,[2,3]].values
y = data.iloc[:,4].values
```

[19]:
```
X
```

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```

[20]:
```
y
```

[20]:
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```

[23]:
```
from sklearn.model_selection import train_test_split
```

[25]:
```
X_train, X_test, y_train, y_test = train_test_split( X, y, test_size=0.25,␣
↪random_state=0)
```

[26]:
```
from sklearn.preprocessing import StandardScaler
```

[28]:
```
sc = StandardScaler()
X_train= sc.fit_transform(X_train)
X_test = sc.transform(X_test)
```

[29]:
```
from sklearn.linear_model import  LogisticRegression
```

[32]:
```
classifier=LogisticRegression(random_state=0)
classifier.fit(X_train,y_train)
```

[32]:
```
LogisticRegression(random_state=0)
```

[33]:
```
y_pred = classifier.predict(X_test)
```

[34]:
```
from sklearn.metrics import accuracy_score
```

[35]:
```
accuracy_score(y_test,y_pred) * 100
```

[35]:
```
89.0
```