

---

# Detección de Fraude con tarjeta de crédito

Eguivar Villca Shirley Carminia

---

# LIMPIEZA DE DATOS :

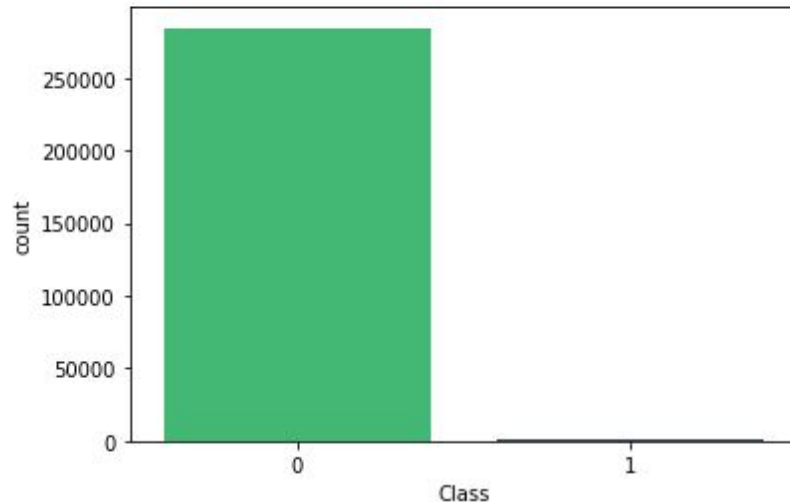
Usando undersampling para balancear el dataset

DESPUES

ANTES

```
No Fraude : 99.83 %  
Fraude : 0.17 %
```

```
: <matplotlib.axes._subplots.AxesSubplot at 0x227b5de7f98>
```



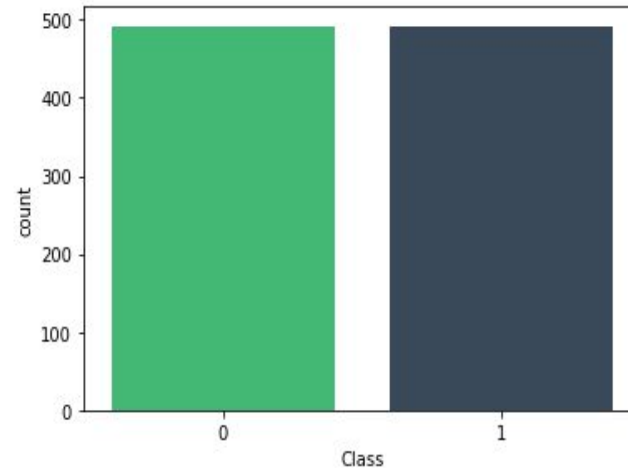
Random under-sampling:

Class 0: 492

Class 1: 492

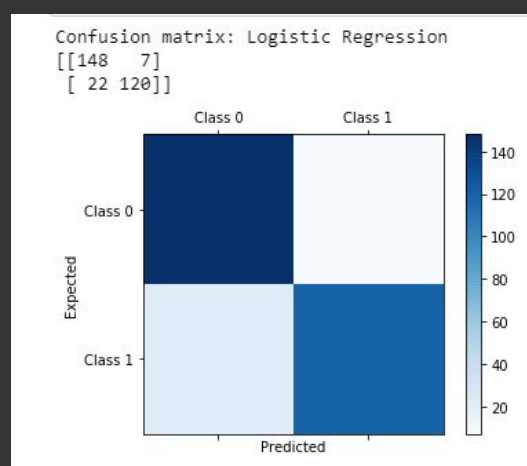
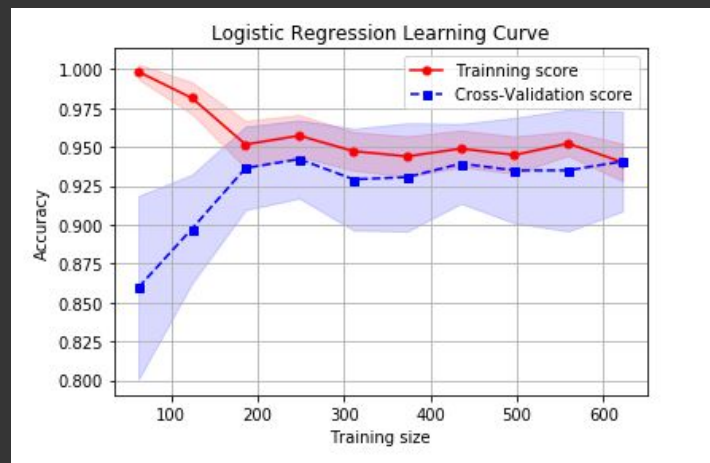
Proportion: 1.0 : 1

```
sns.countplot('Class',data=new_df, palette=["#2ecc71","#34495e"])  
plt.show()
```

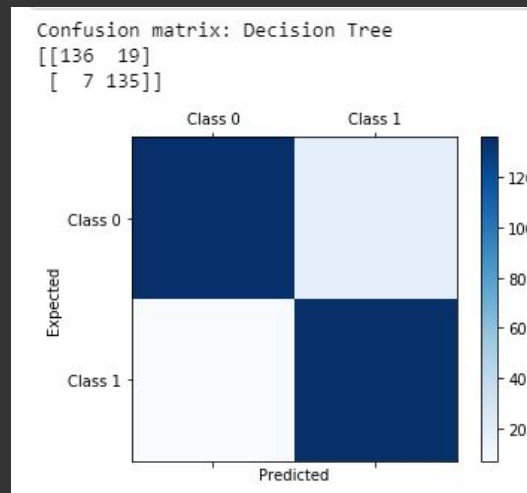
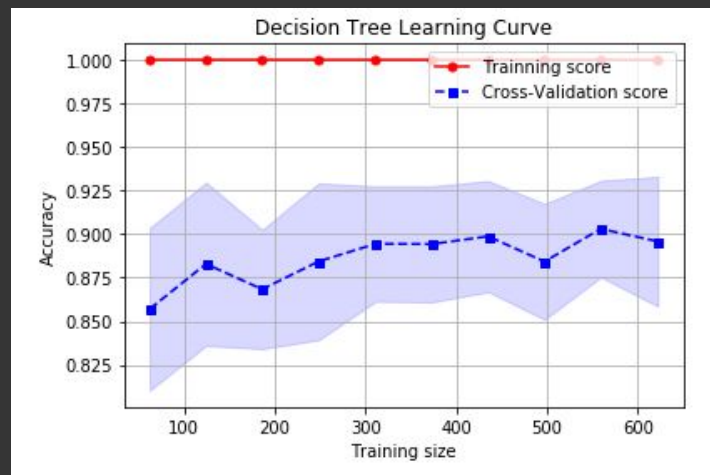


# Modelos Aplicados

Regresión logística



Arbol de decision



# Conclusiones

El modelo de Regresión logística Tiene Mejor desempeño.

Regresión logística

```
accuracy = metrics.accuracy_score(y_pred,y_test)
print("accuracy:",accuracy)
precision = metrics.precision_score(y_pred,y_test)
print("precision:",precision)
f1_score = metrics.f1_score(y_pred,y_test)
print("f1_score:",f1_score)
recall_score = metrics.recall_score(y_pred,y_test)
print("recall_score/sensitivity:",recall_score)
```

accuracy: 0.9528619528619529  
precision: 0.9436619718309859  
f1\_score: 0.9503546099290779  
recall\_score/sensitivity: 0.9571428571428572

Arbol de decision

```
accuracy = metrics.accuracy_score(y_pred,y_test)
print("accuracy:",accuracy)
precision = metrics.precision_score(y_pred,y_test)
print("precision:",precision)
f1_score = metrics.f1_score(y_pred,y_test)
print("f1_score:",f1_score)
recall_score = metrics.recall_score(y_pred,y_test)
print("recall_score/sensitivity:",recall_score)
```

accuracy: 0.9124579124579124  
precision: 0.9507042253521126  
f1\_score: 0.9121621621621622  
recall\_score/sensitivity: 0.8766233766233766

