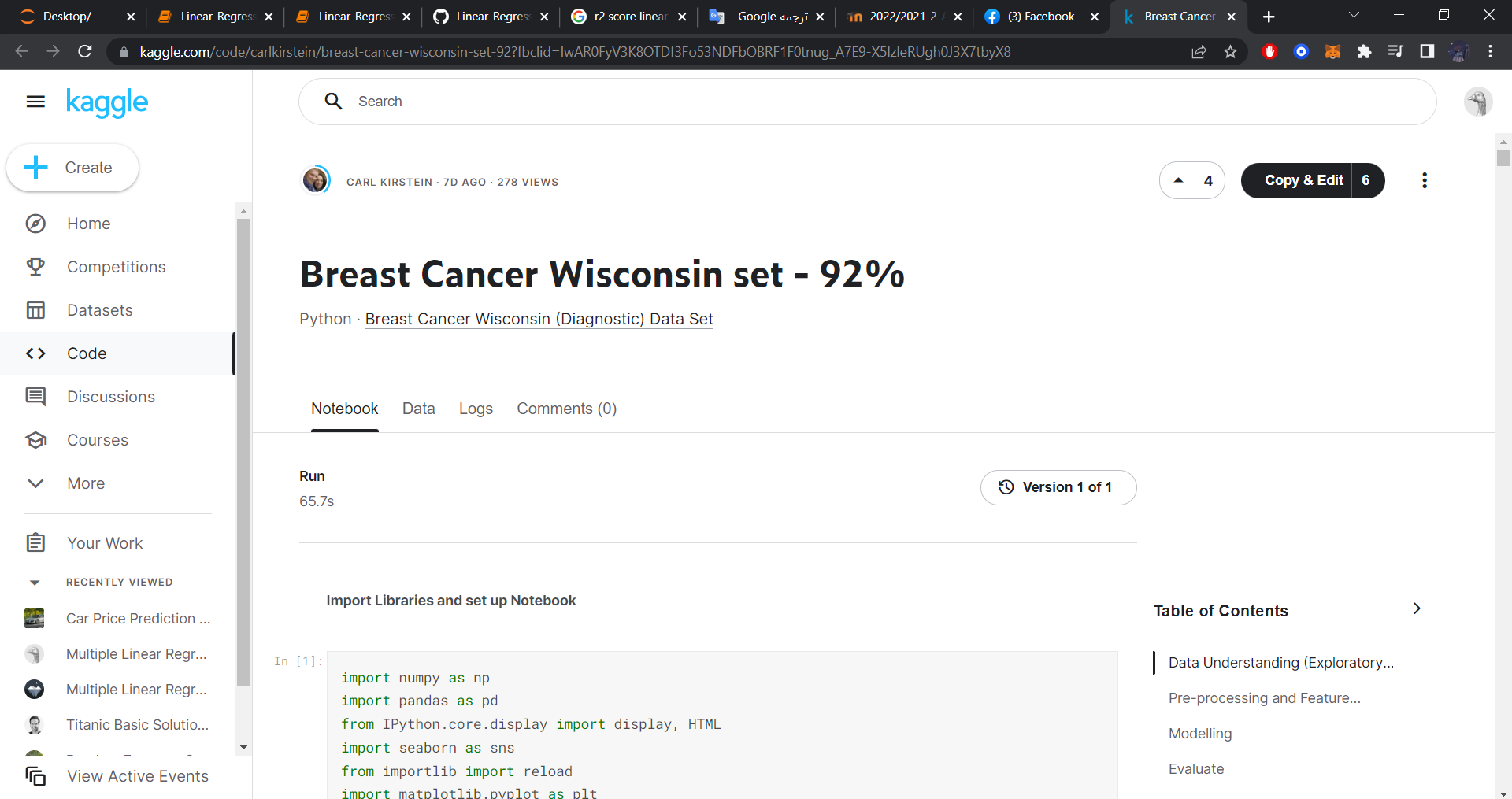
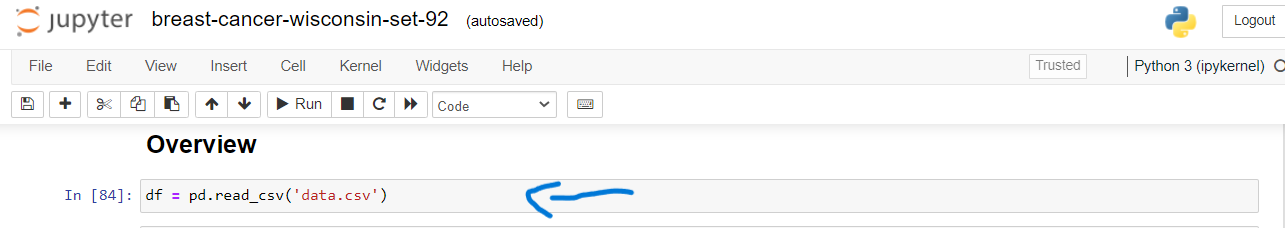
Breast cancer diagnosis(jupyter)

[1]Download Code & DataSet:

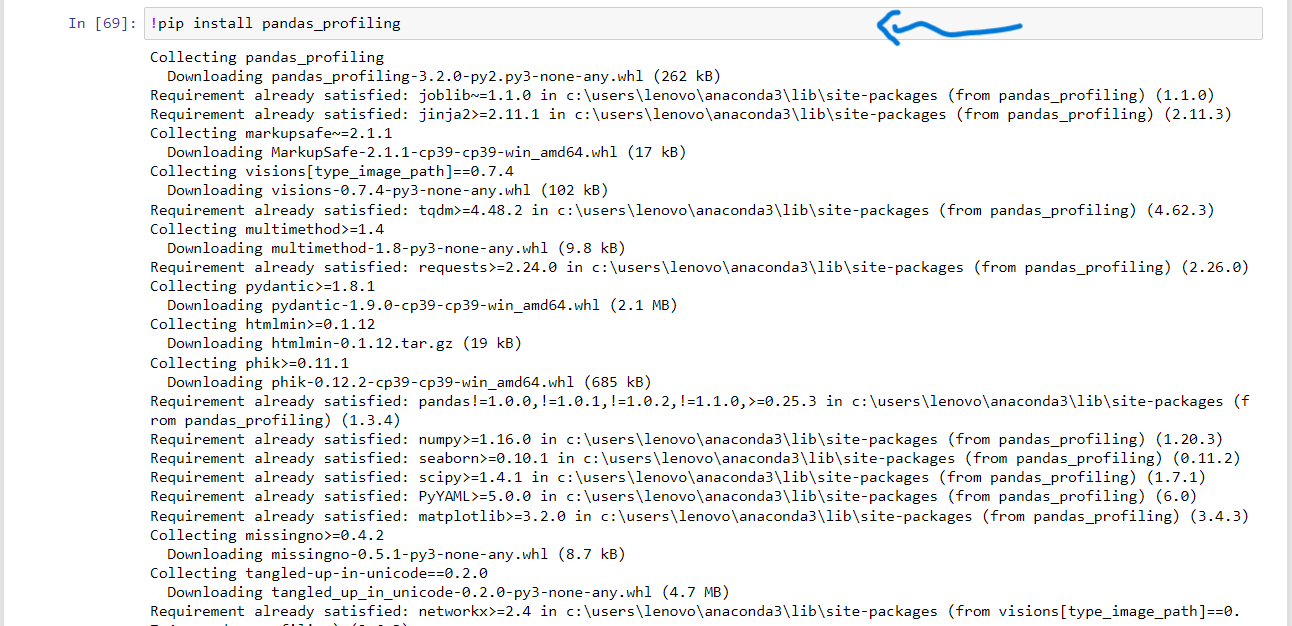
<https://www.kaggle.com/code/carlkirstein/breast-cancer-wisconsin-set-92/notebook>



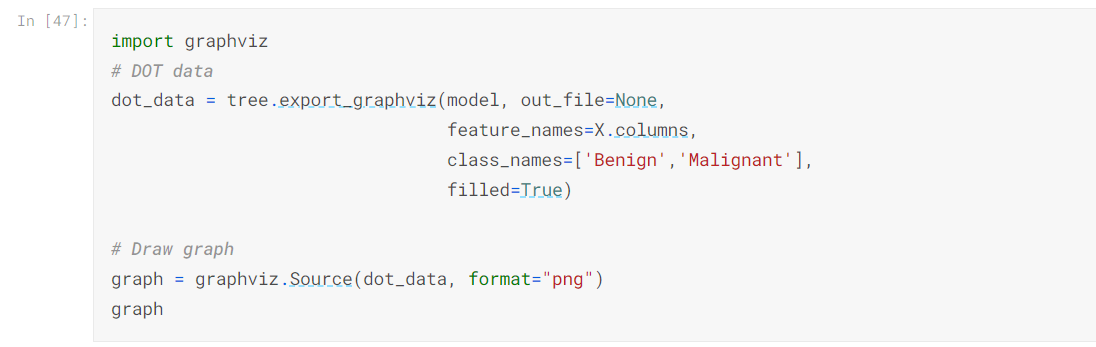
[2]modify this line..



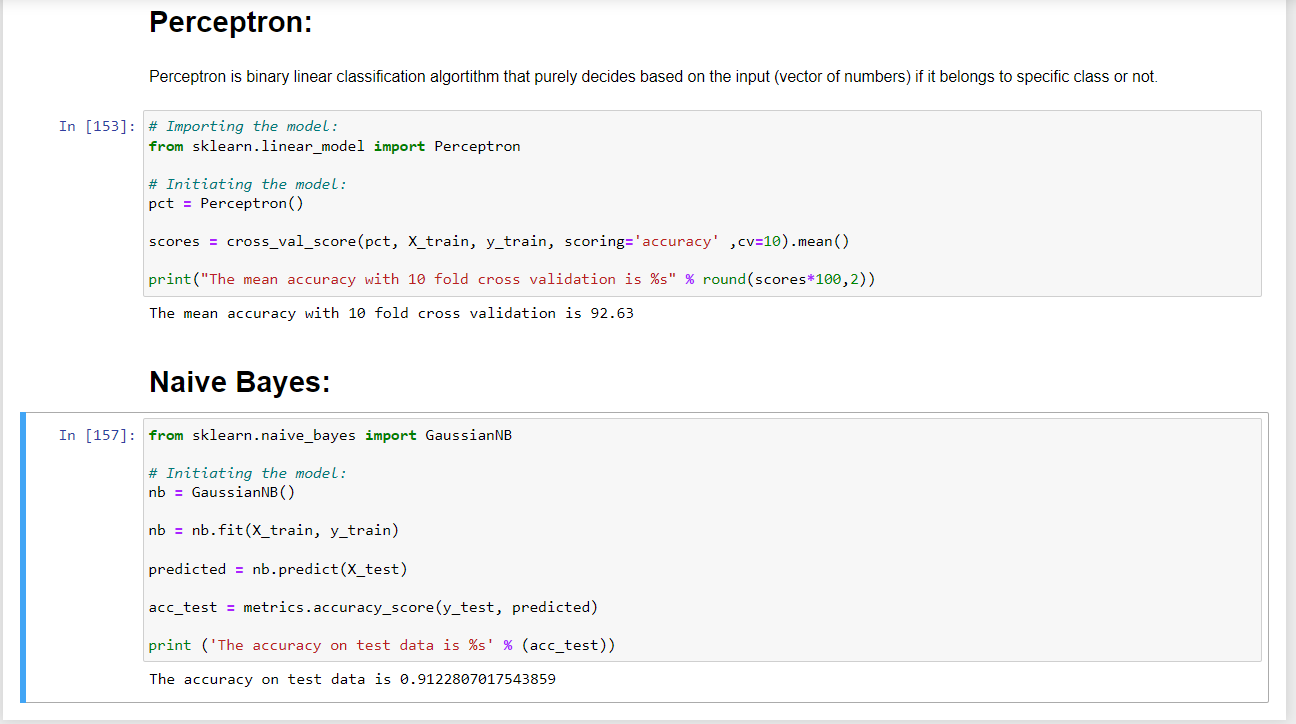
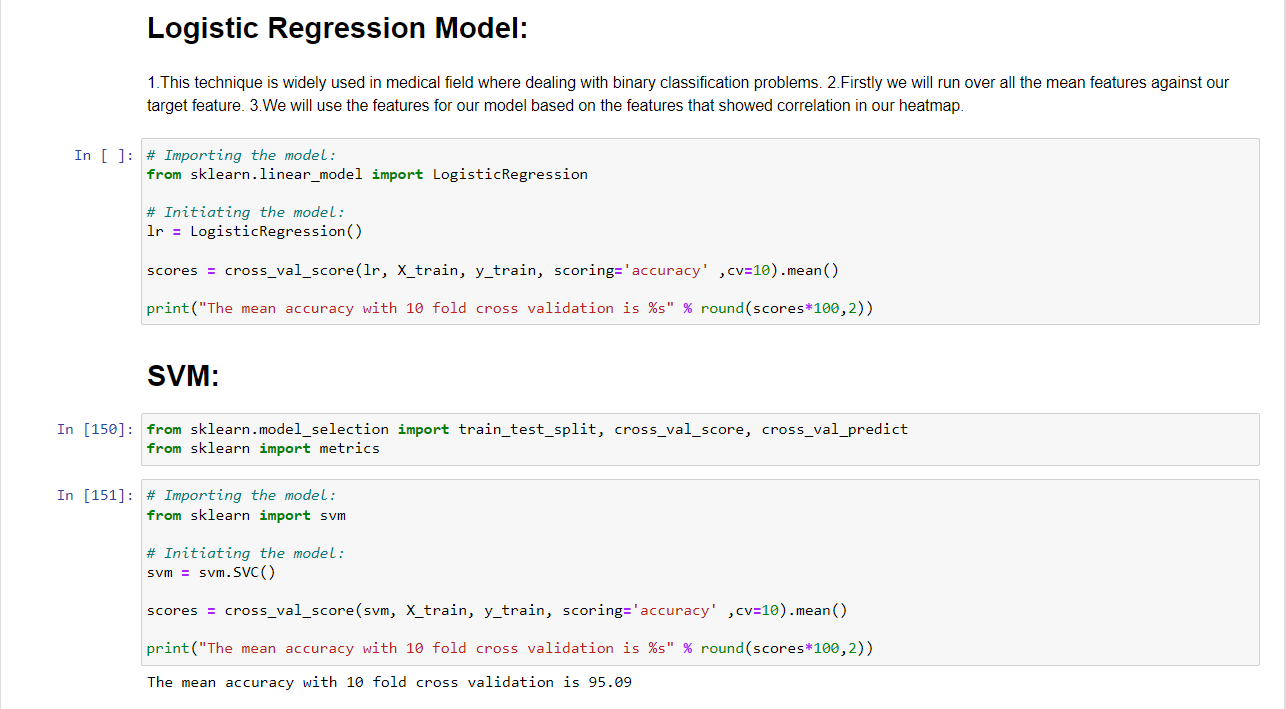
[3]install this model :



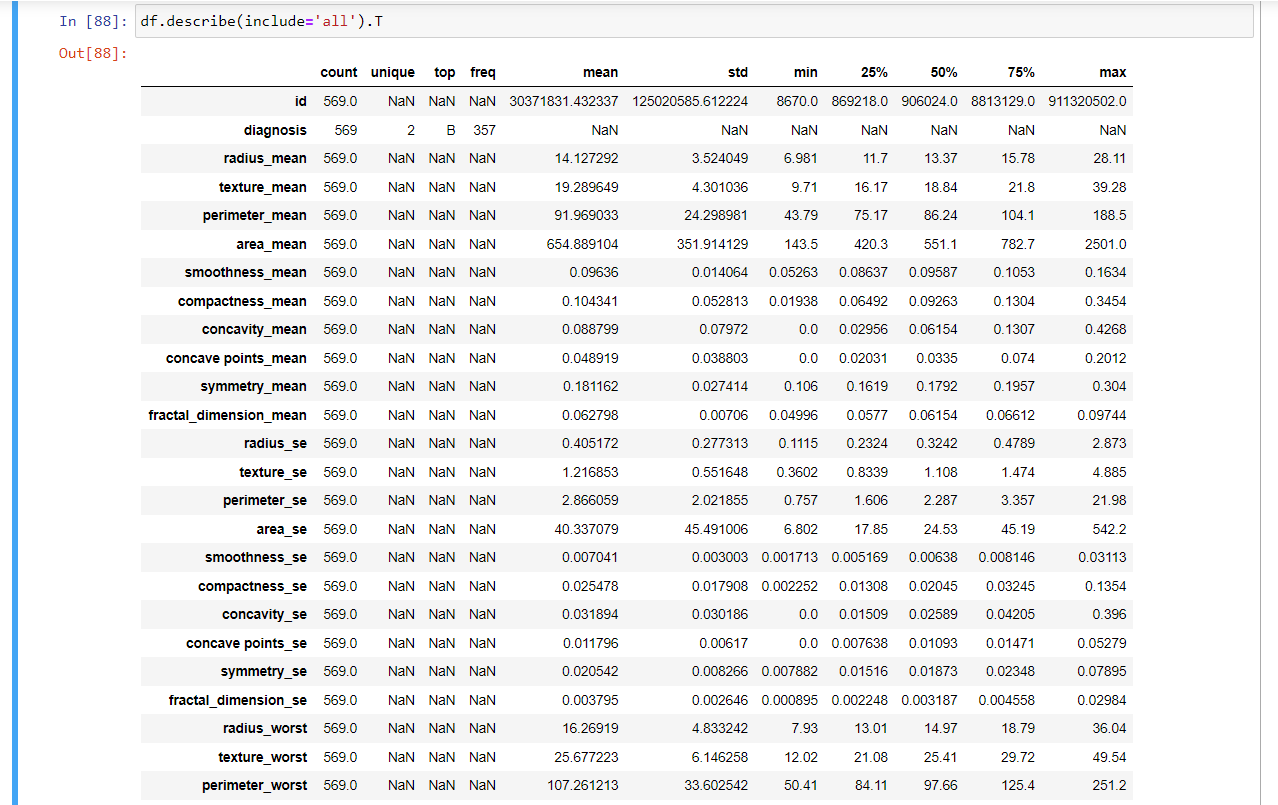
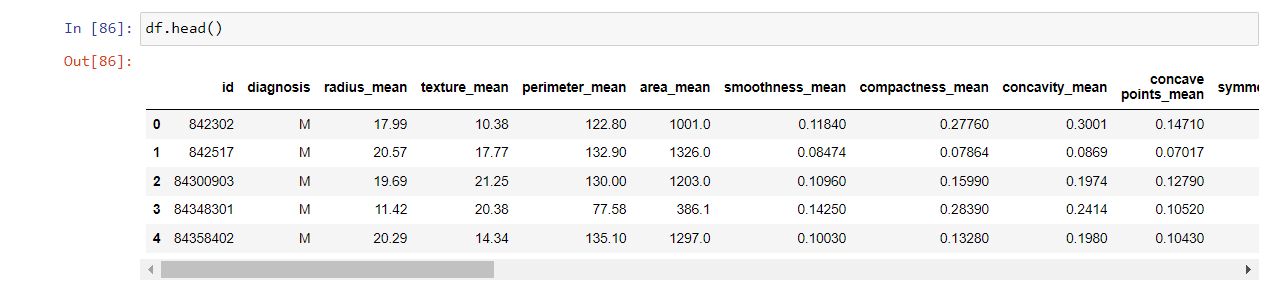
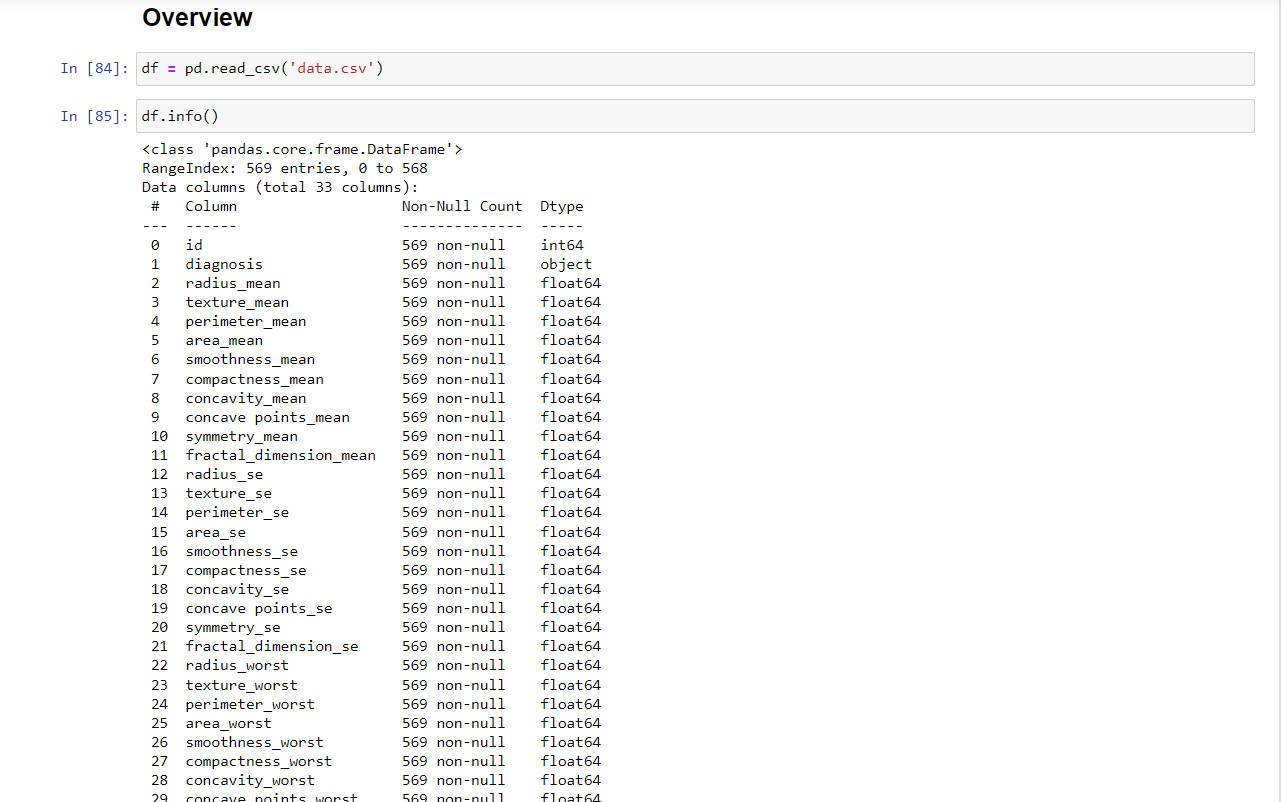
[4]Delete these line of code:

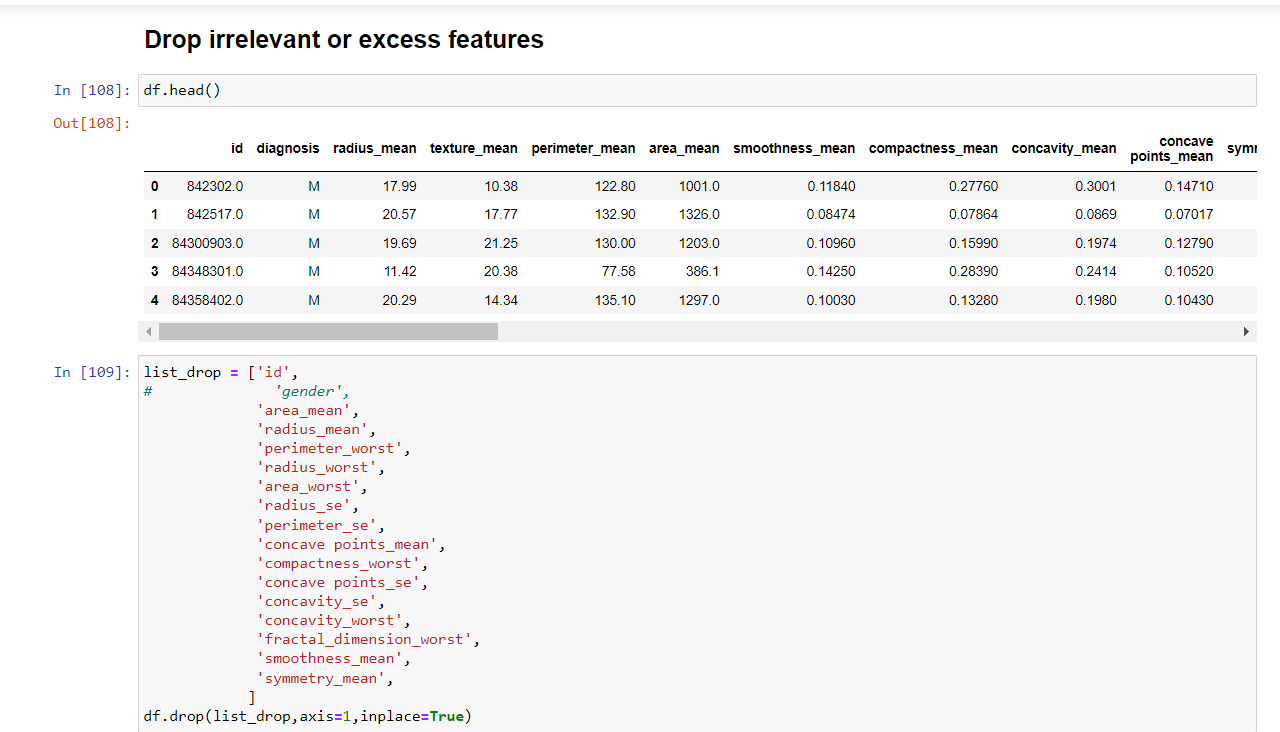
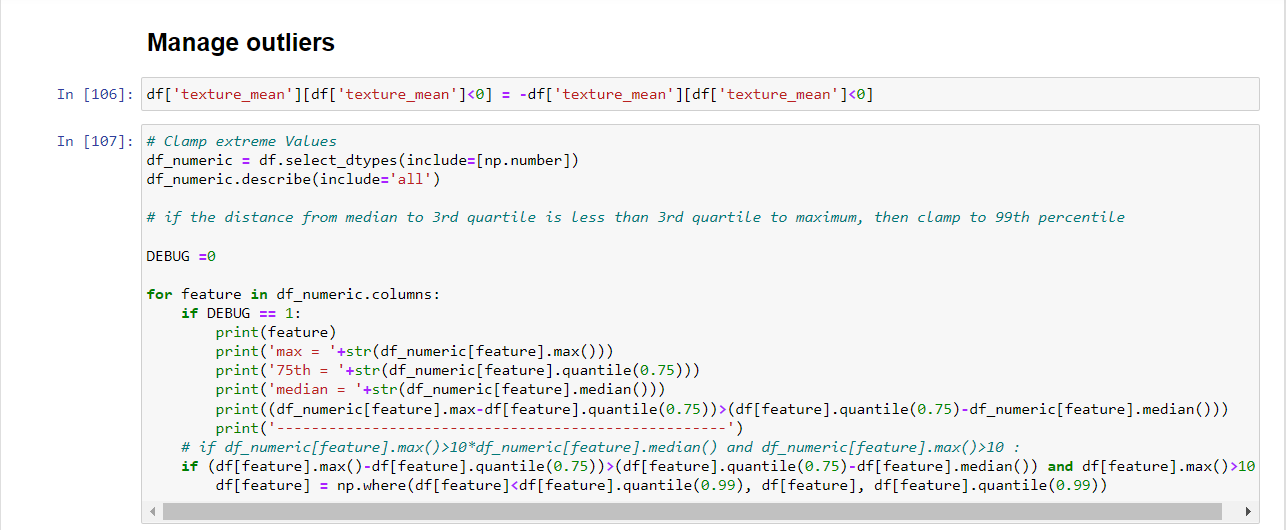
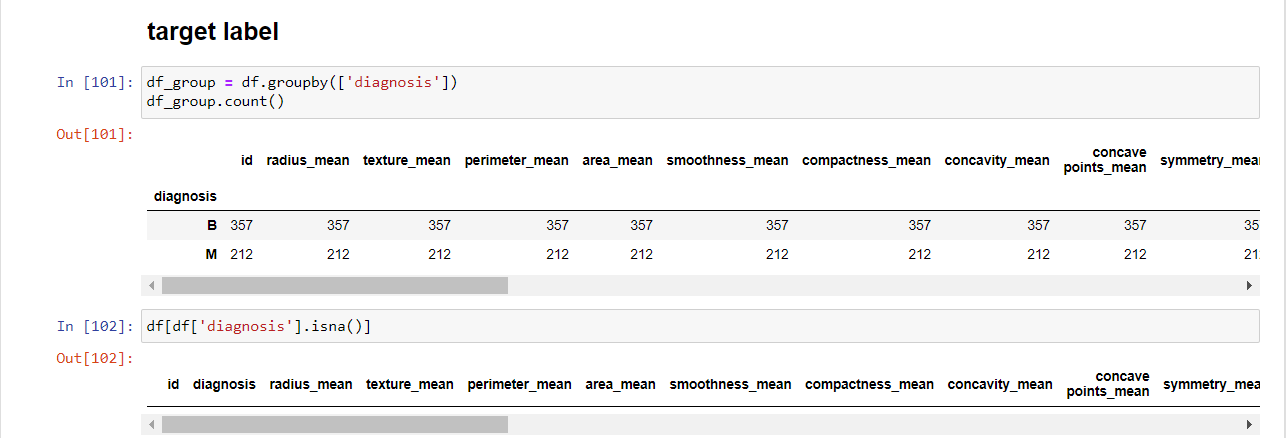
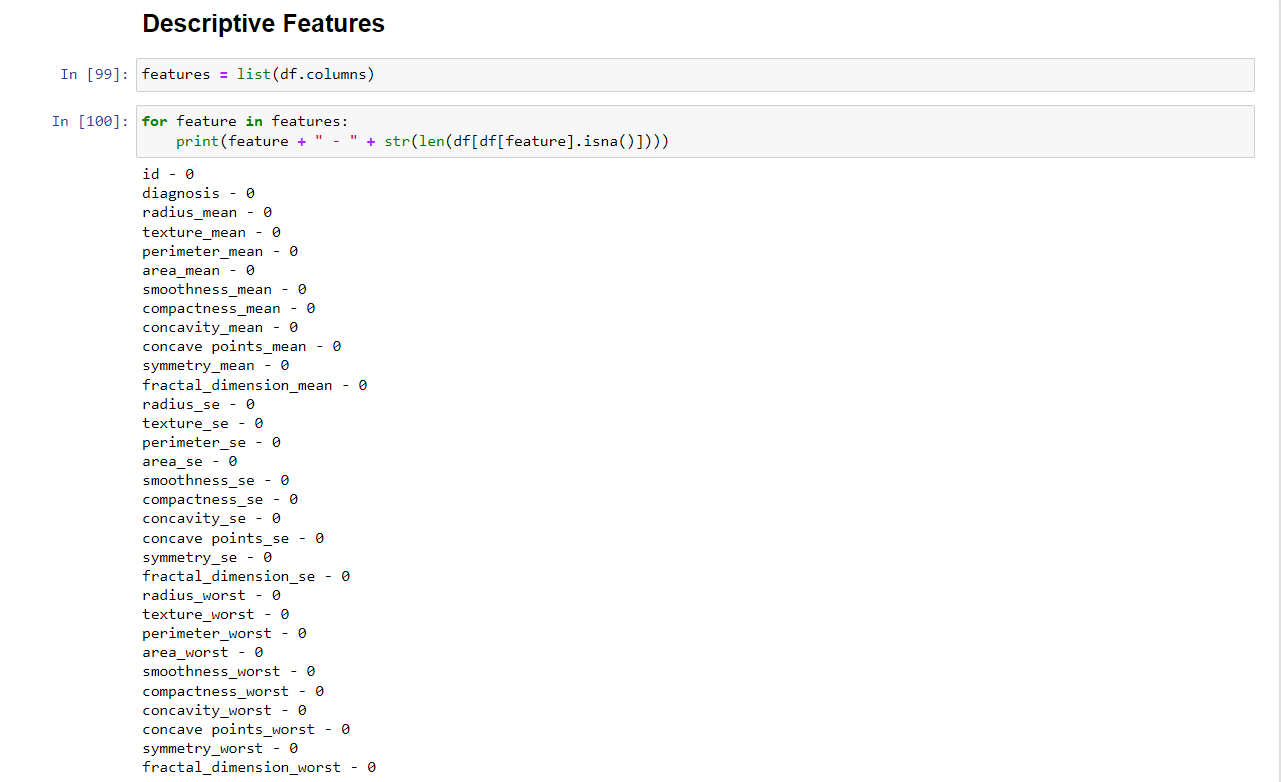
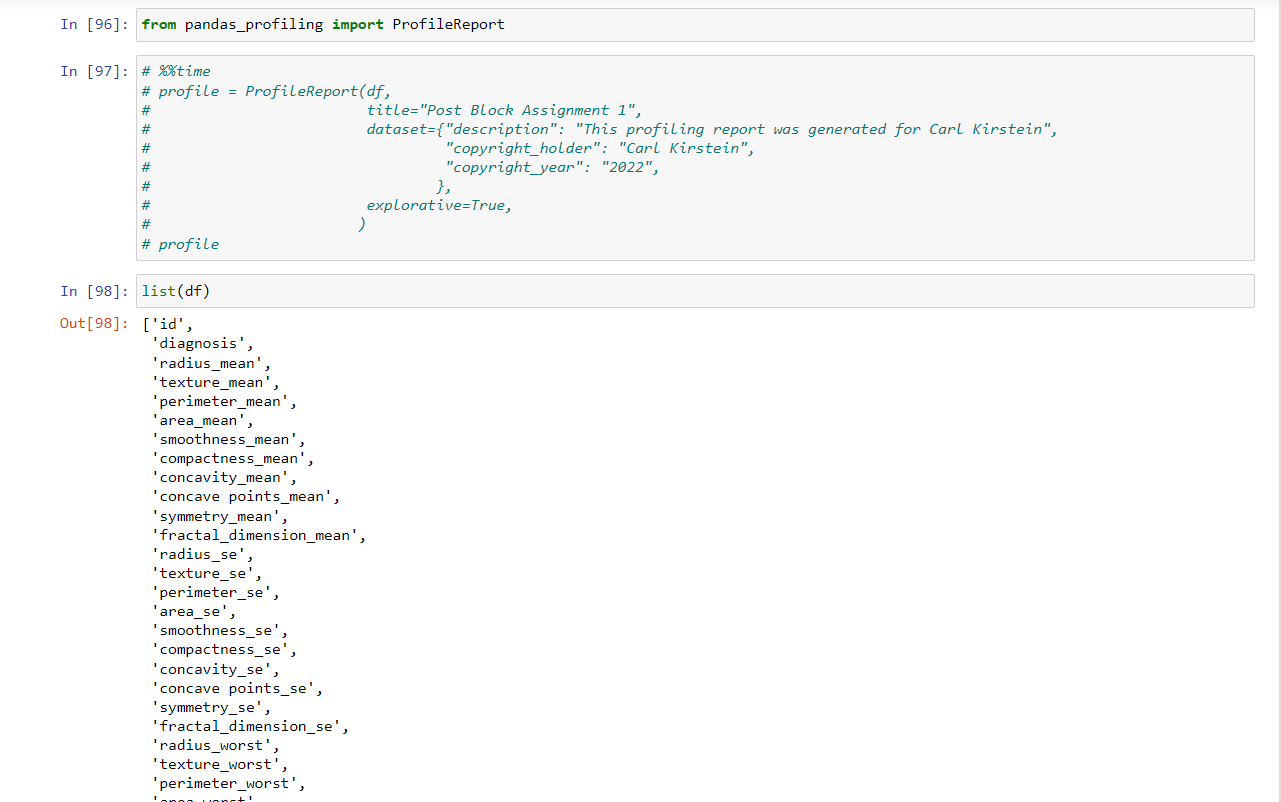
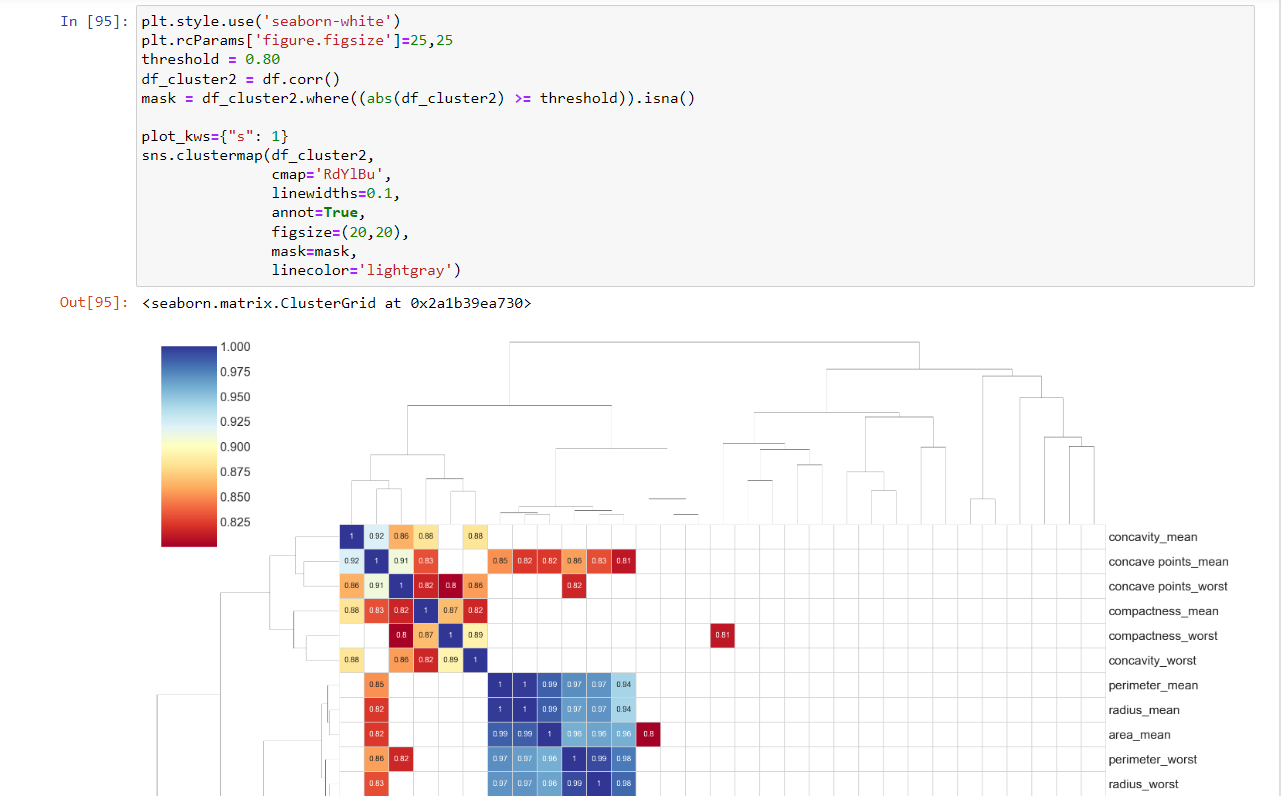
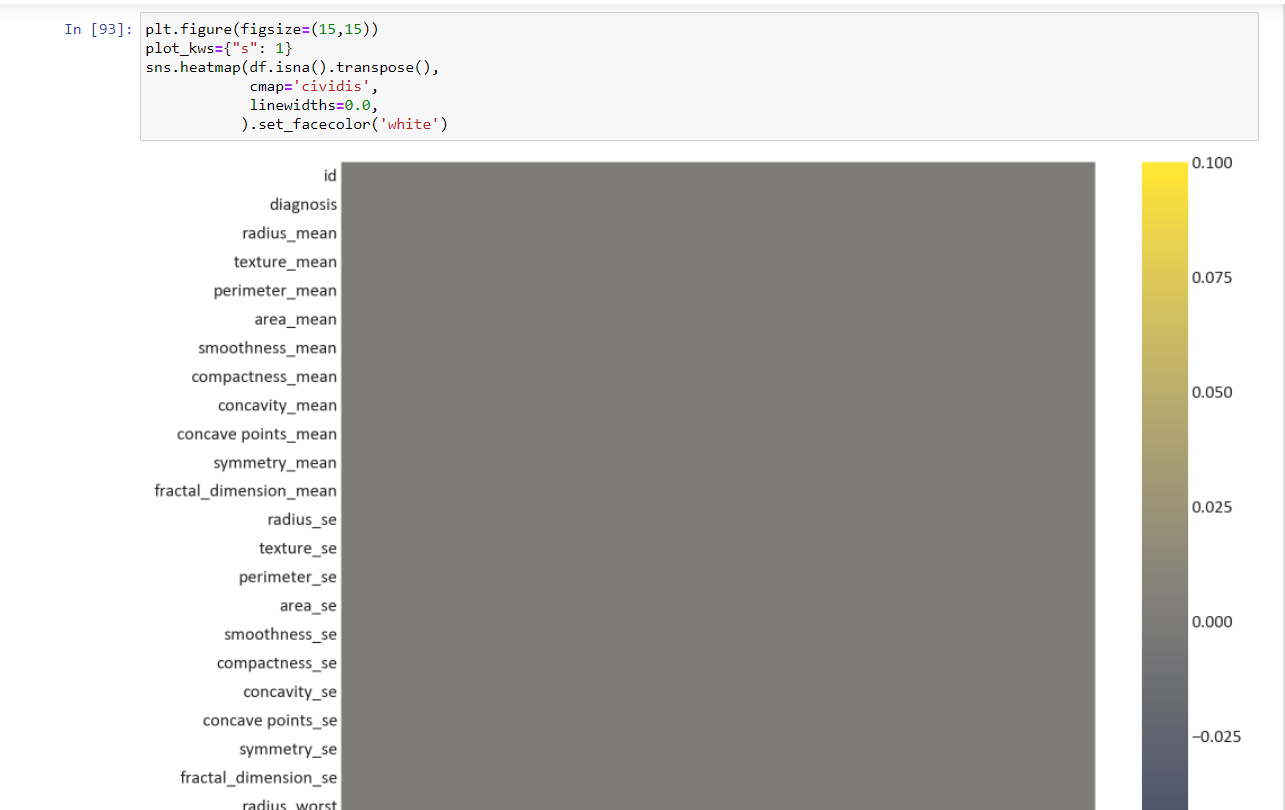
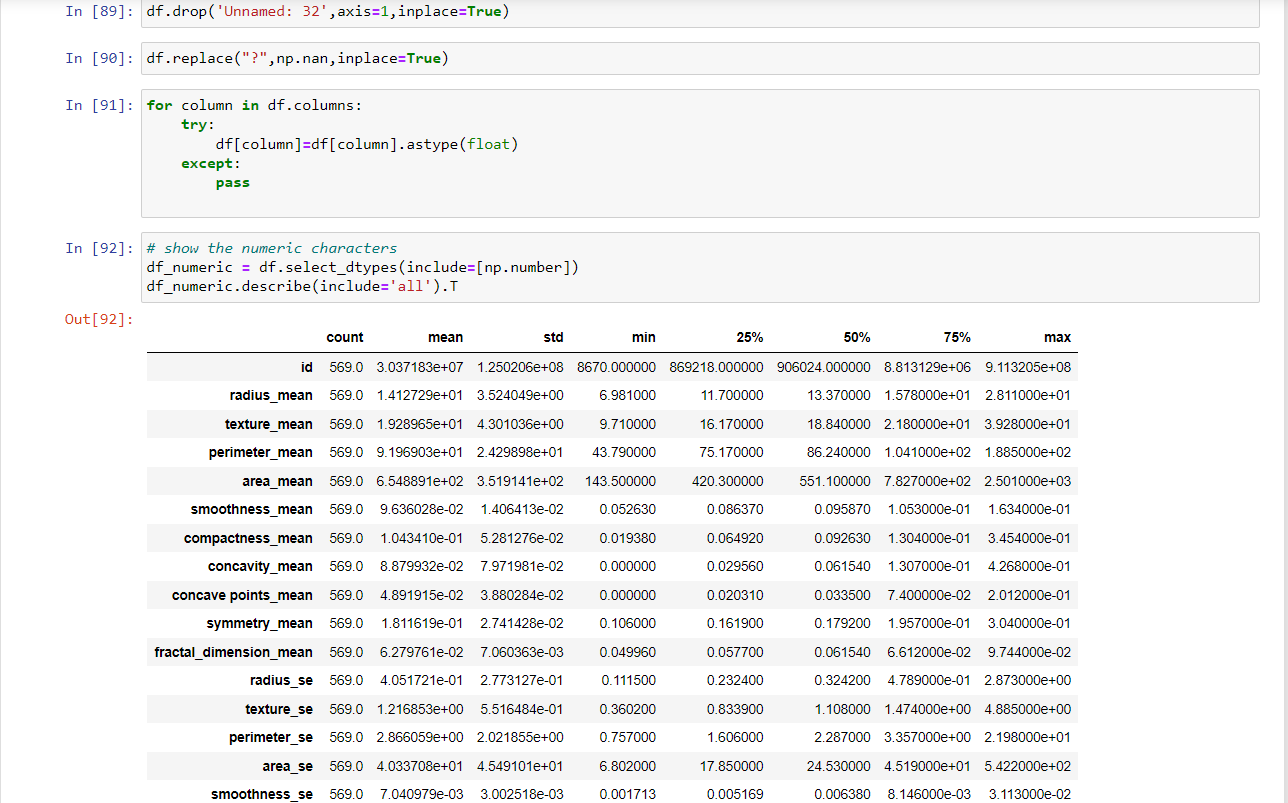


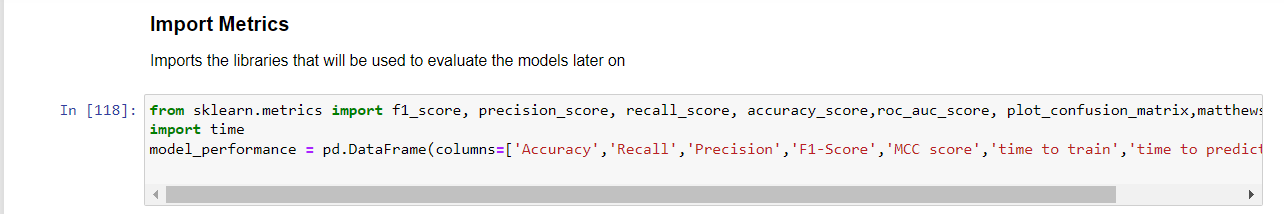
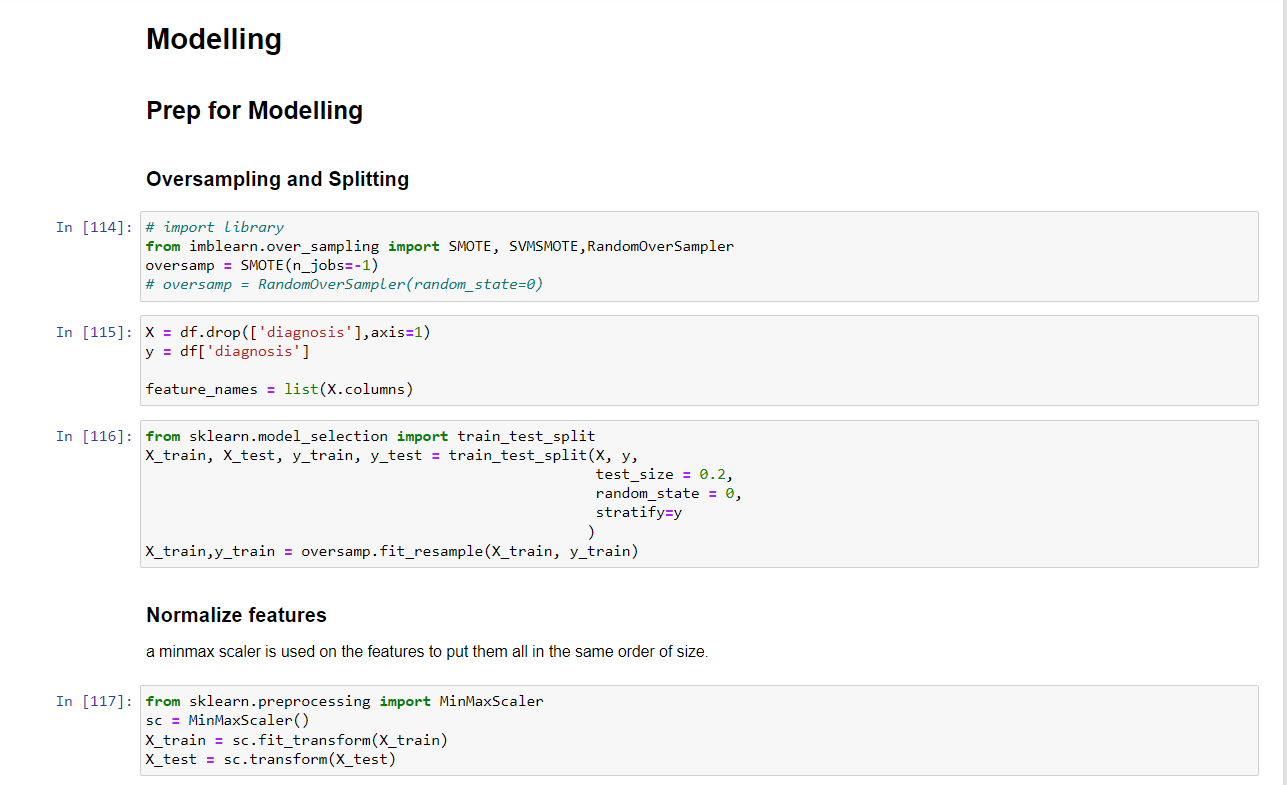
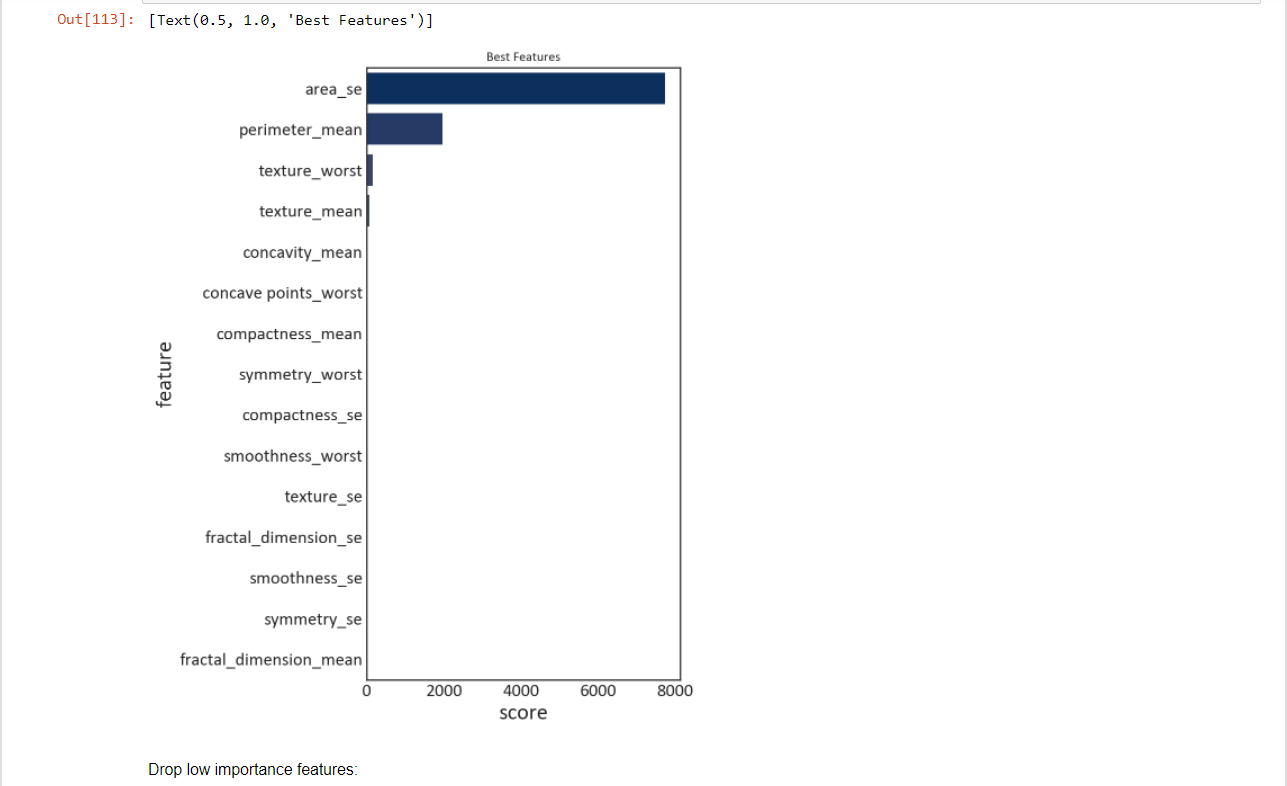
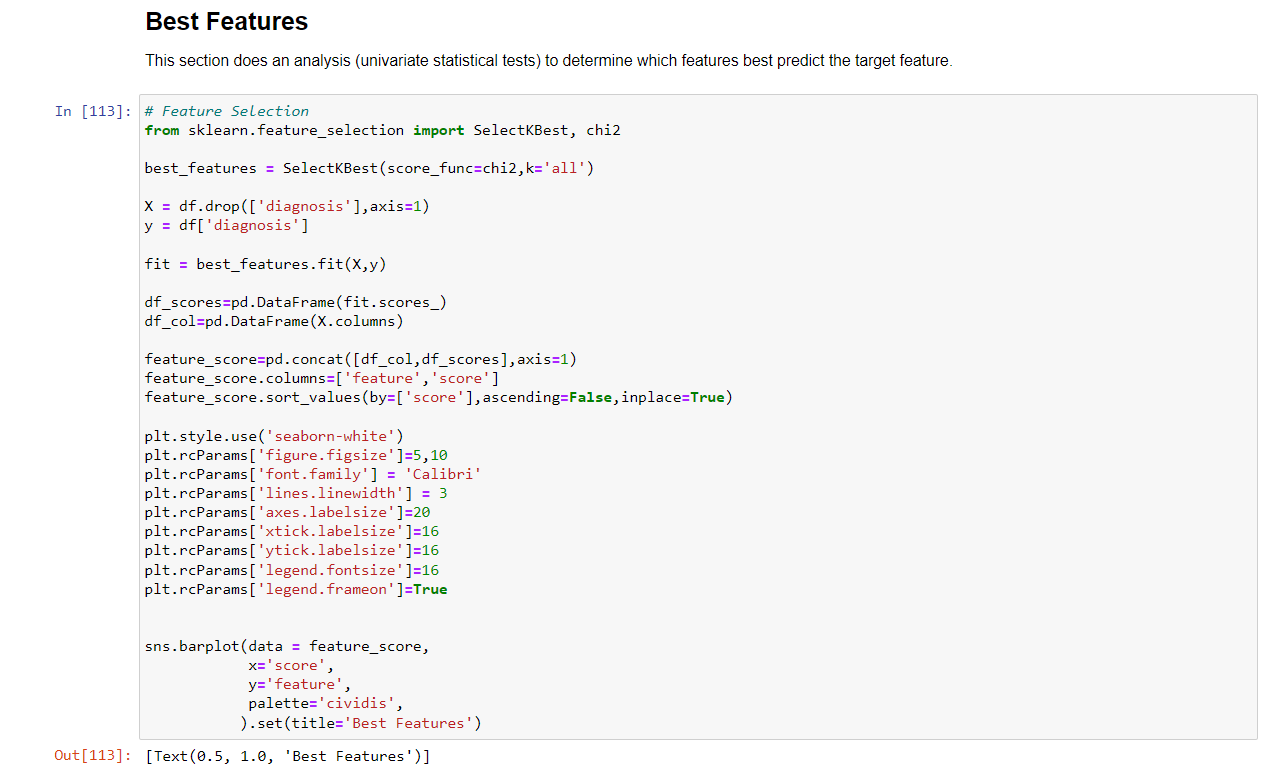
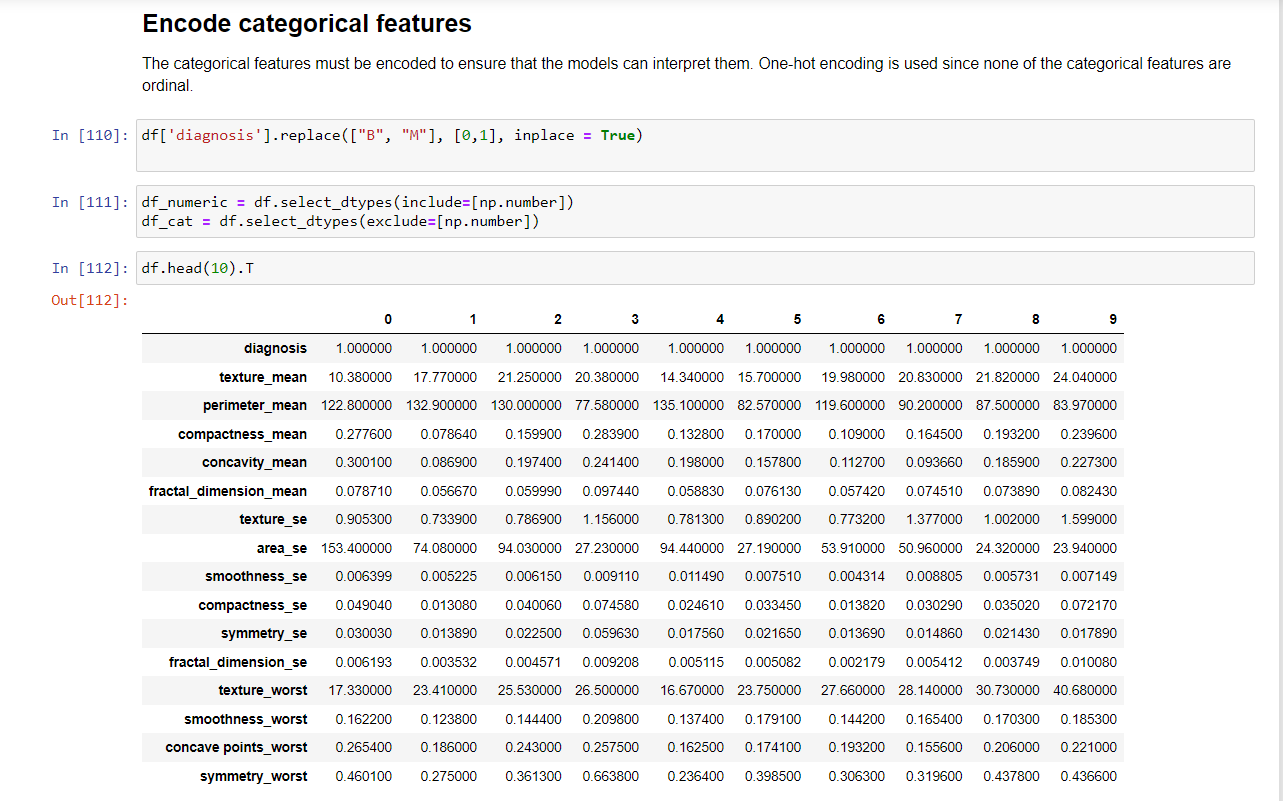
[5]Add these lines of code :

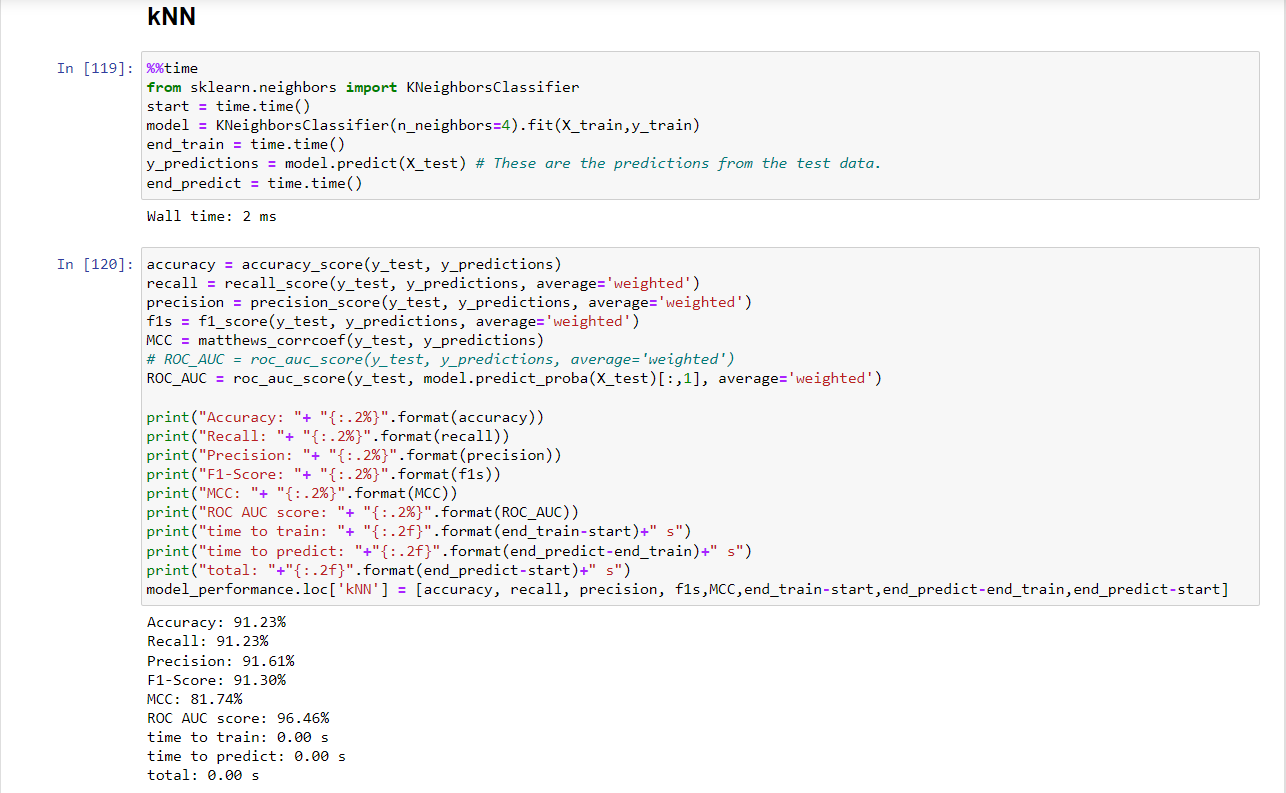


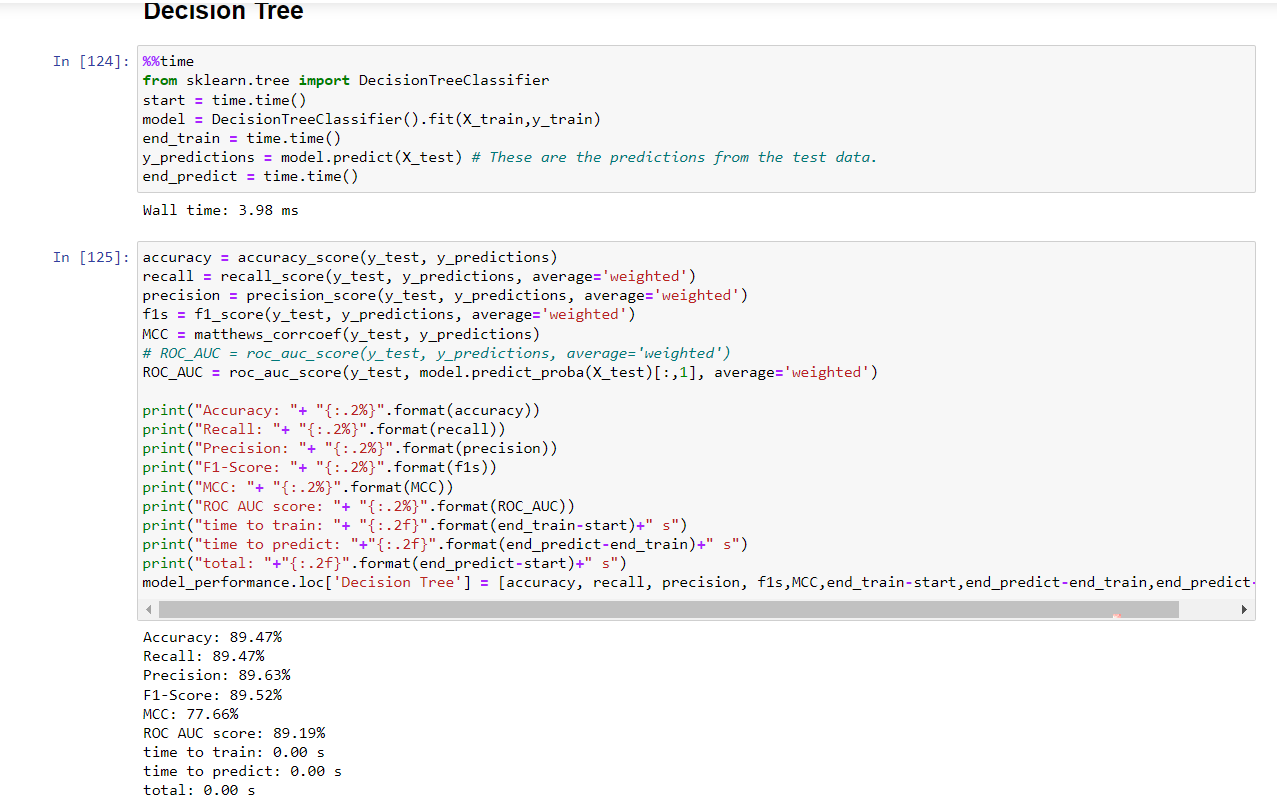
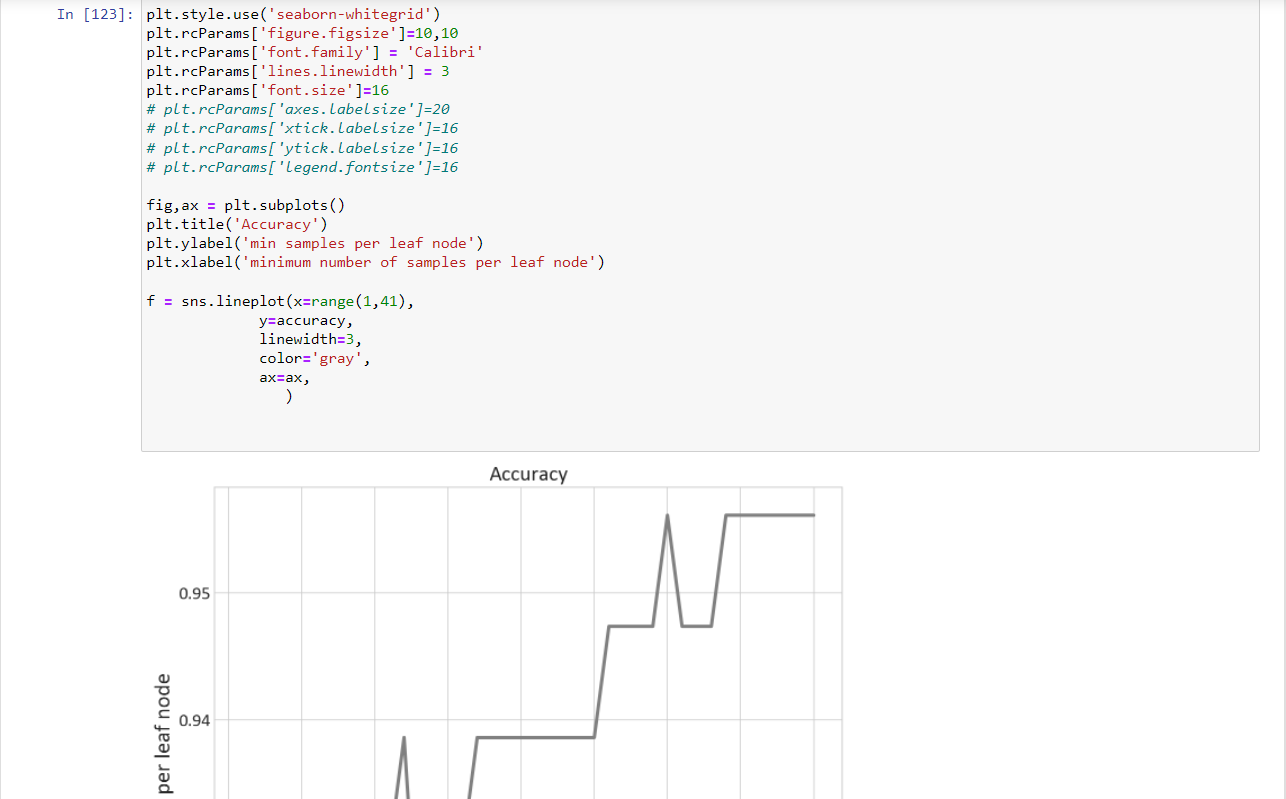
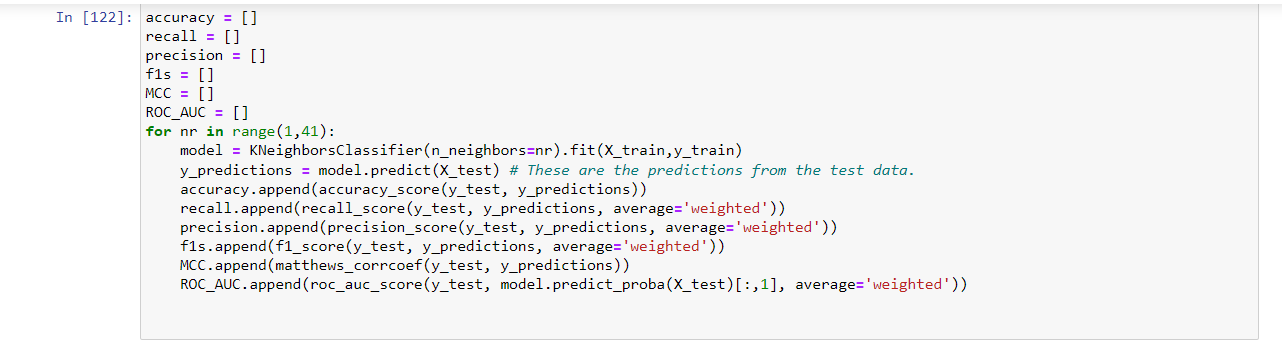
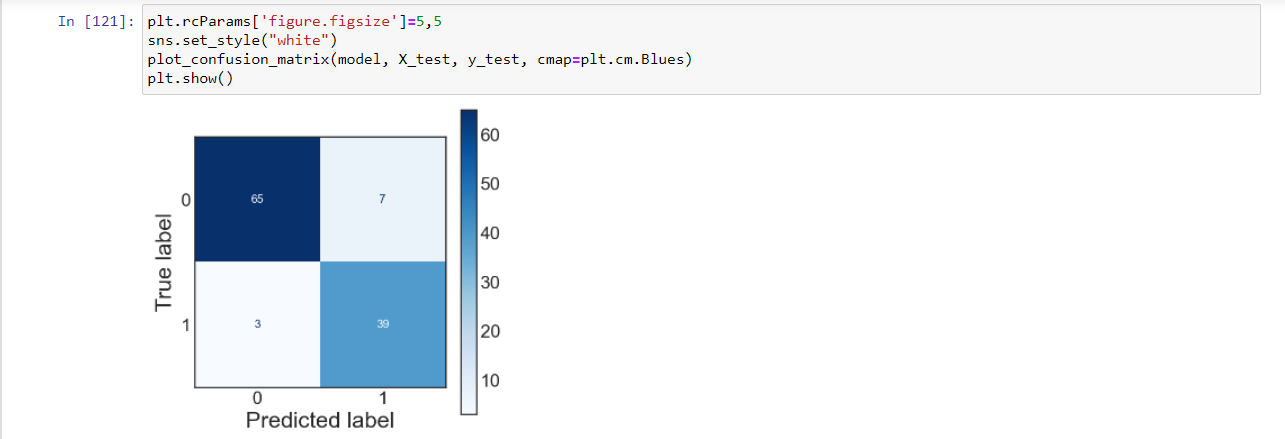
[6]Run the code!

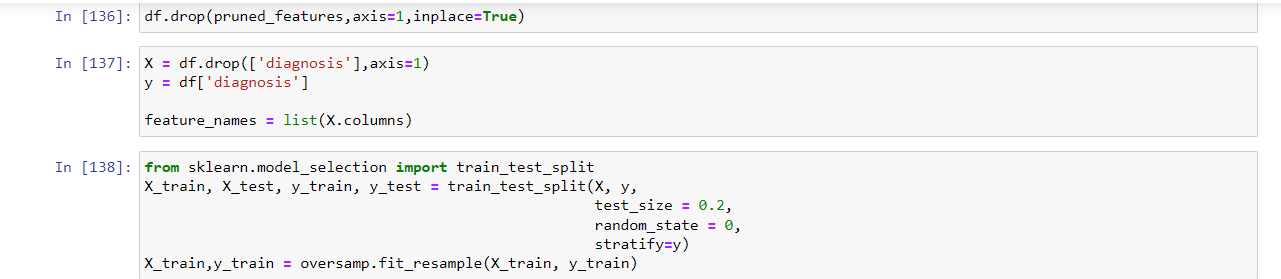
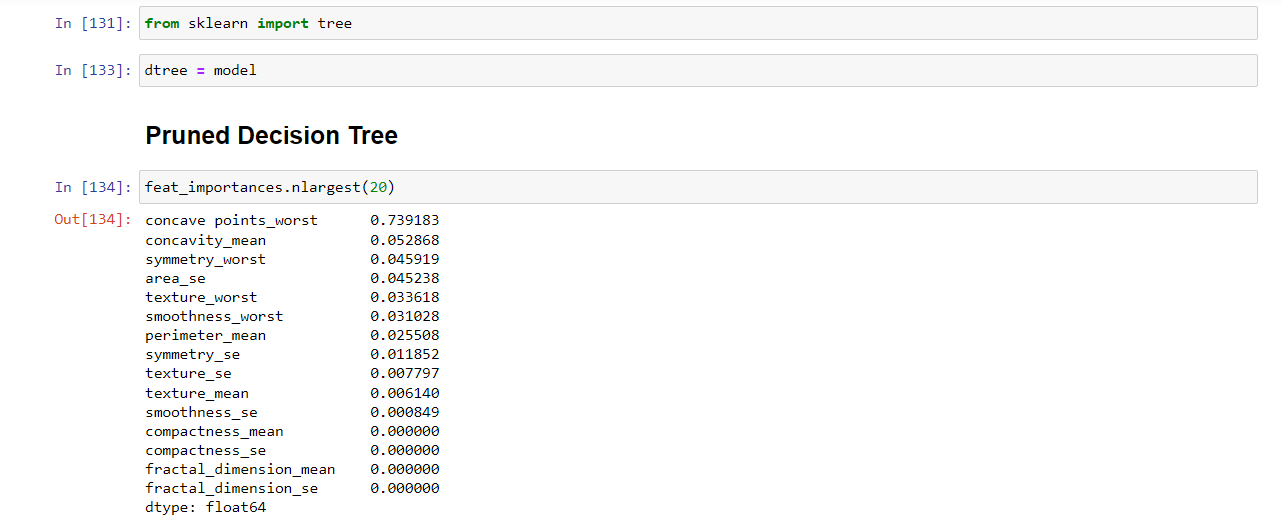
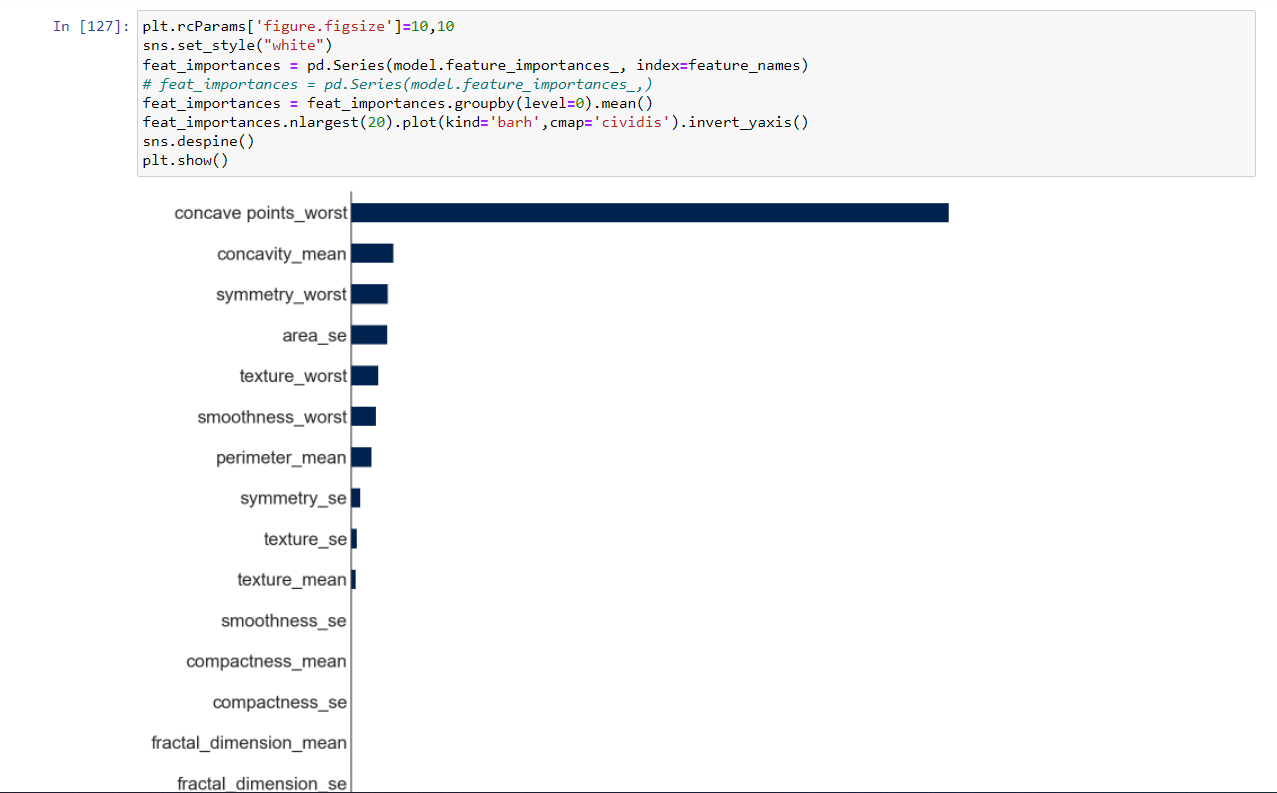
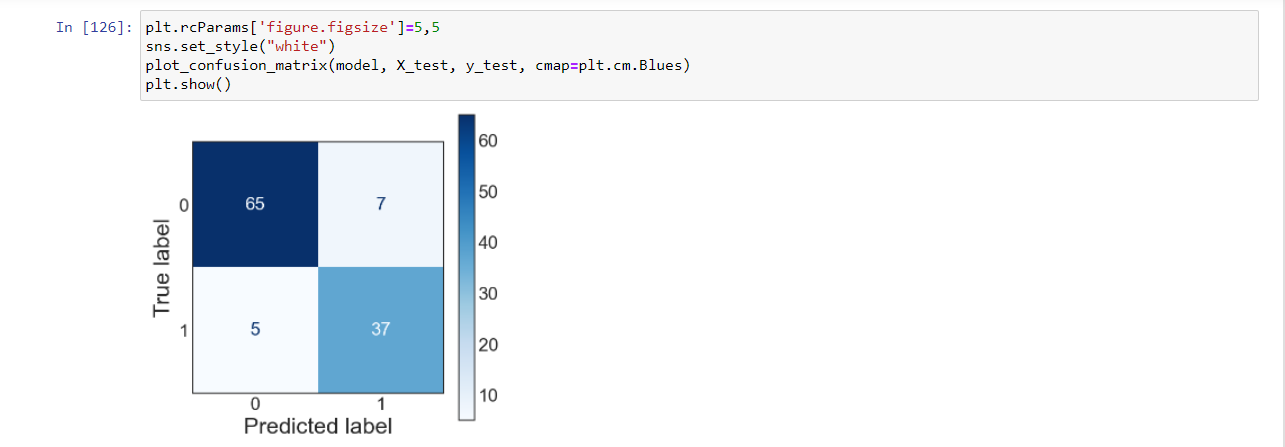


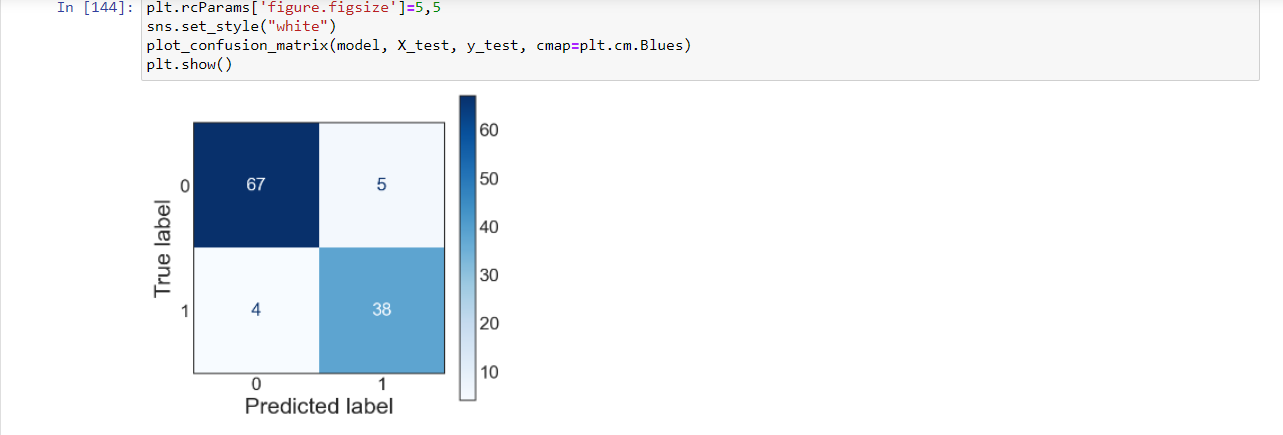
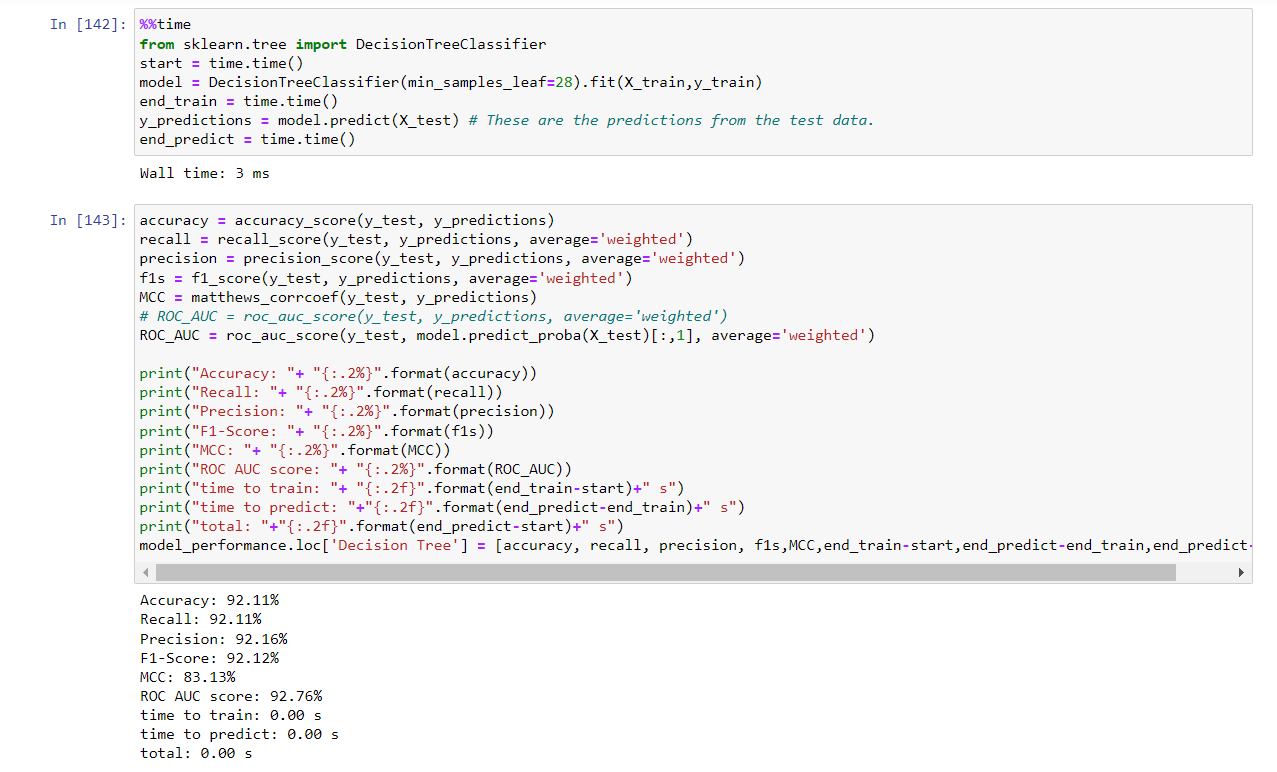
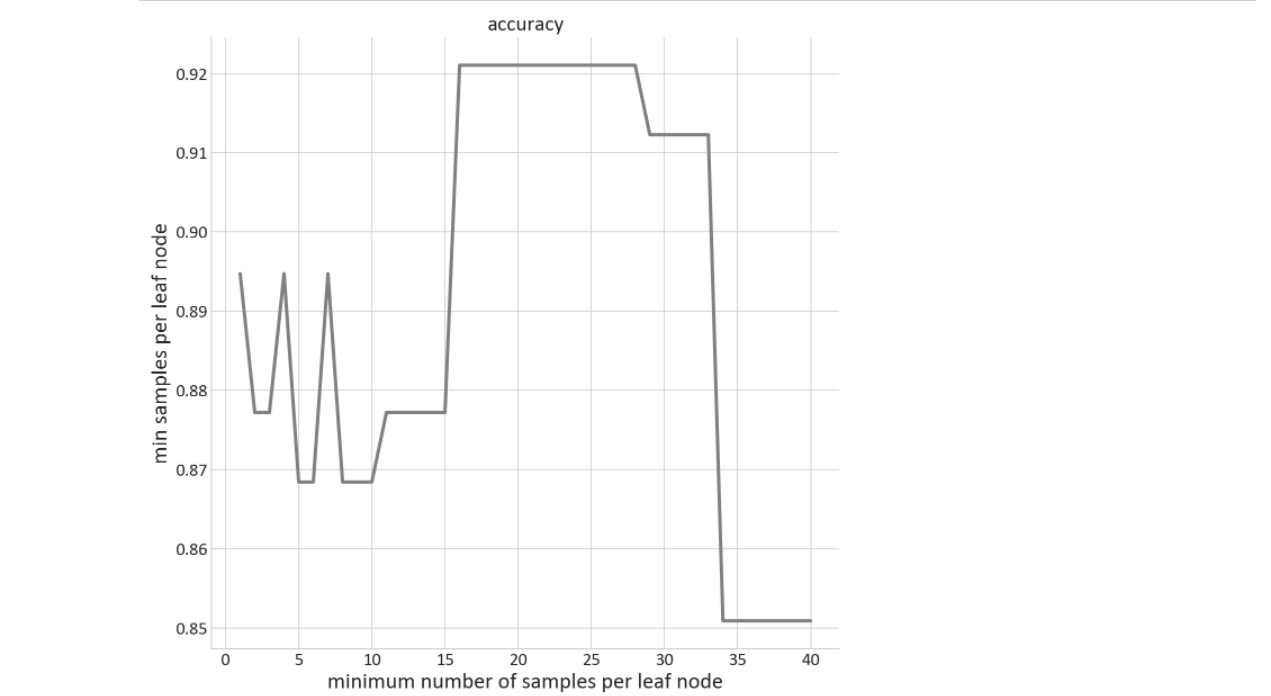


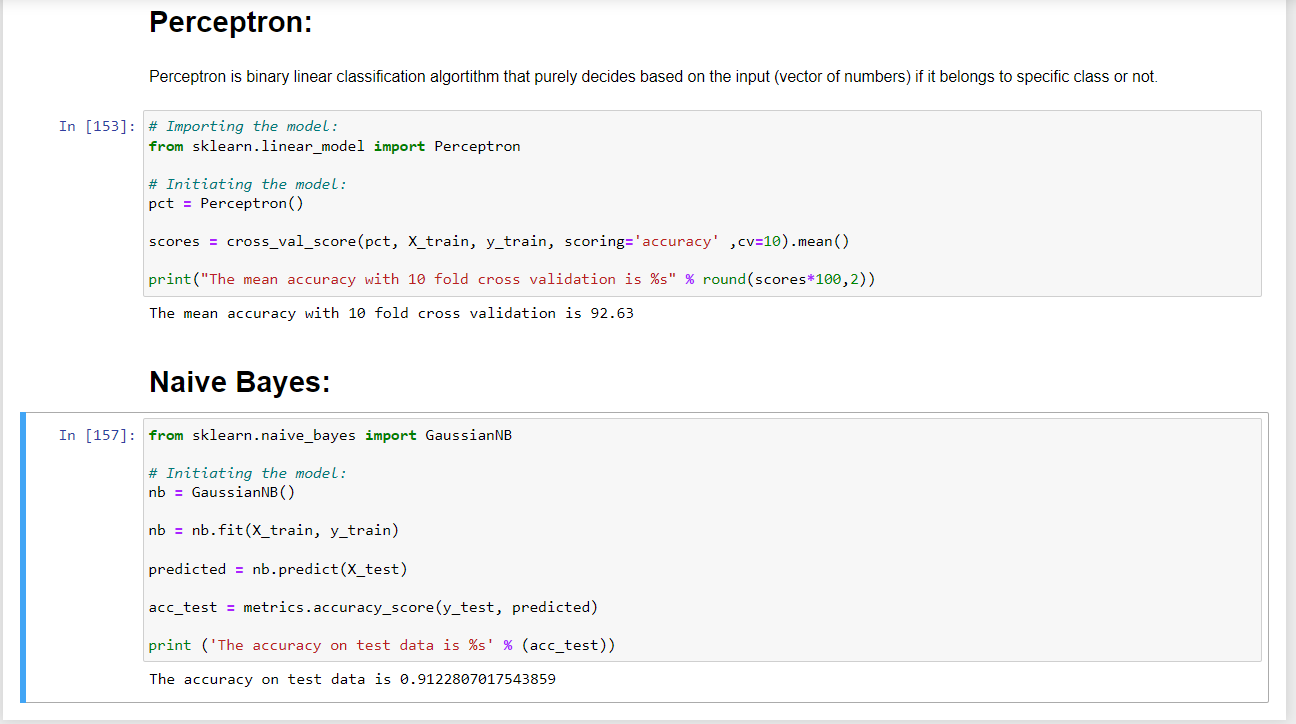
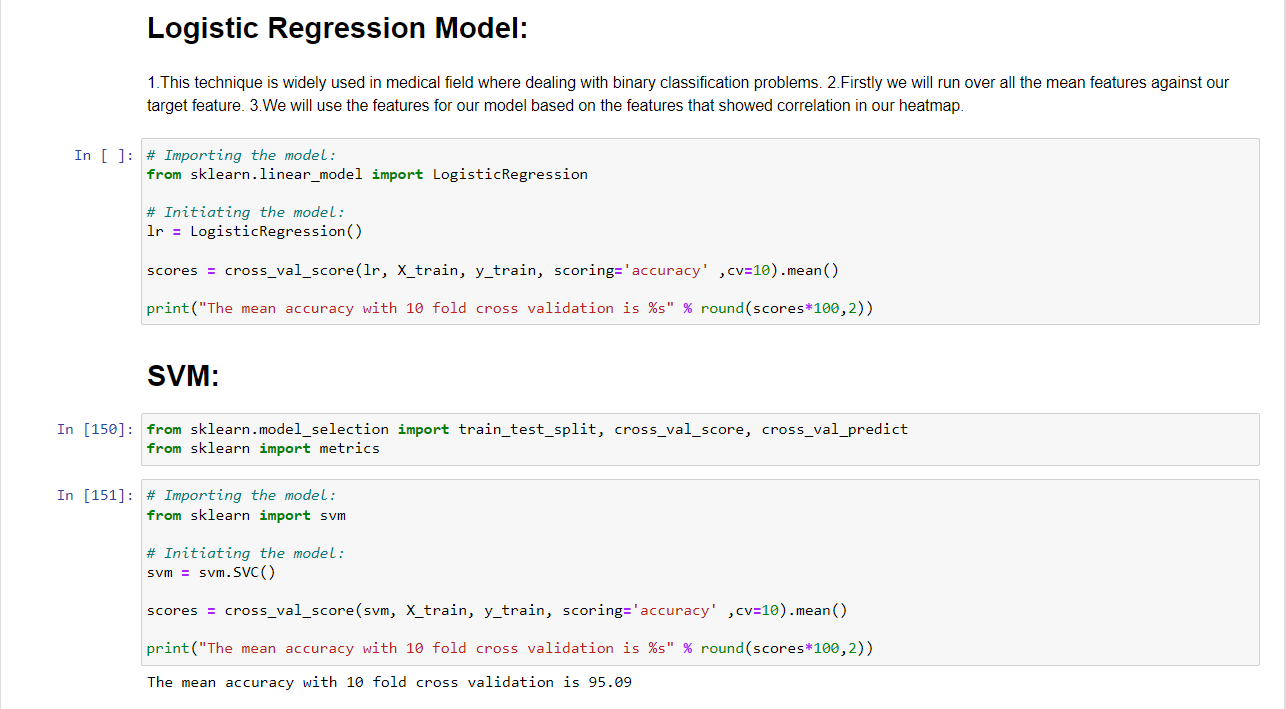
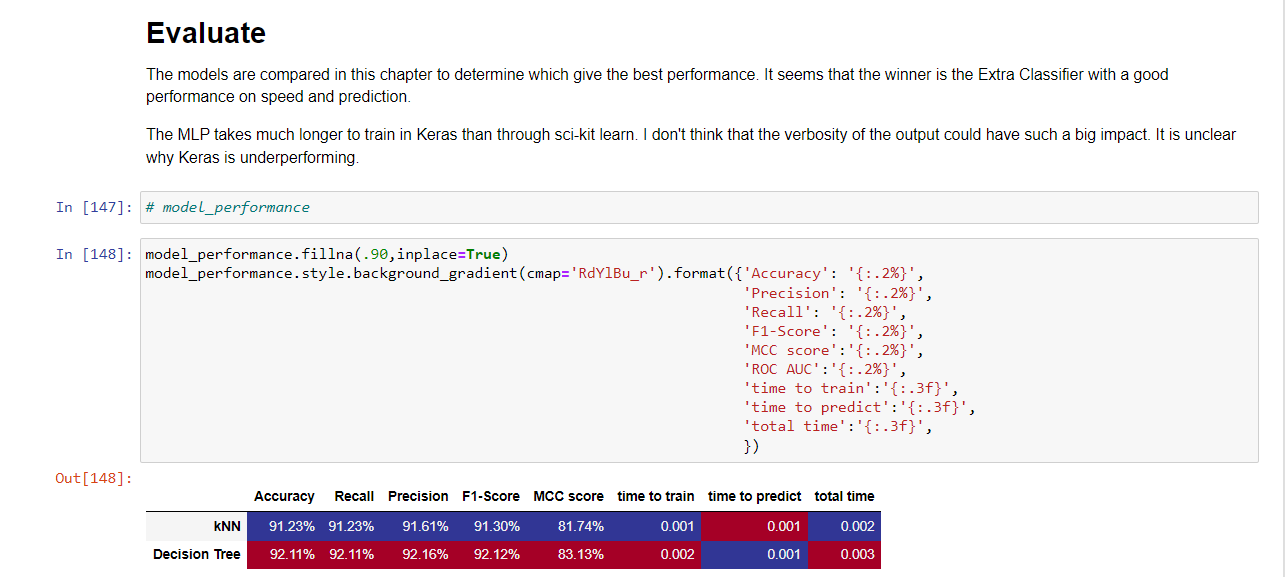












[8]Accuracy of different models..

|  | **Accuracy** | **Recall** | **Precision** | **F1-Score** | **MCC score** | **time to train** | **time to predict** | **total time** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **kNN** | 91.23% | 91.23% | 91.61% | 91.30% | 81.74% | 0.001 | 0.001 | 0.002 |
| **Decision Tree** | 92.11% | 92.11% | 92.16% | 92.12% | 83.13% | 0.002 | 0.001 | 0.003 |

* **Logistic Regression Model: 0.98**

# SVM: 0.97

# Perceptron: 0.98

# Naive Bayes: 0.9473684210526315

# Random Forest Model: 0.95

# Stochastic Gradient Descent: 0.92

# Gradient Boosting Classifier:0.94

# Extremely Random Trees: 0.96

# XGBoost Classifier: 0.96

### Name : Ramah hashem madi

### ID no. : 31909303044