This report summarizes a logistic regression model trained to predict breast cancer diagnosis (malignant or benign) using the Kaggle Breast Cancer Wisconsin dataset.

#### Model Evaluation:

- Accuracy: ~96%

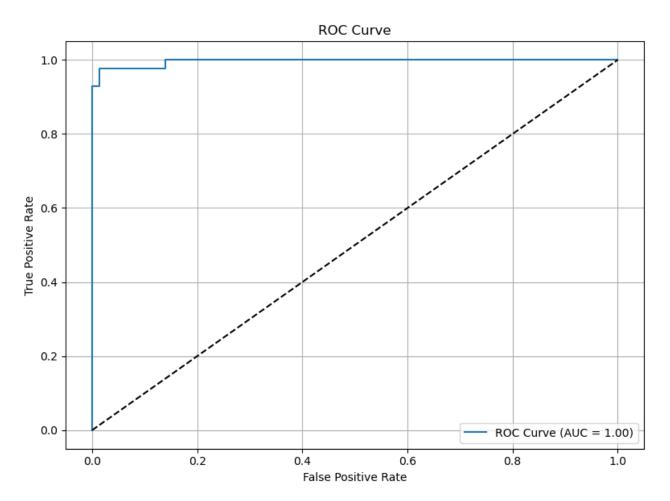
- Precision: 0.975

- Recall: 0.9286 (default) / 0.976 (threshold=0.3)

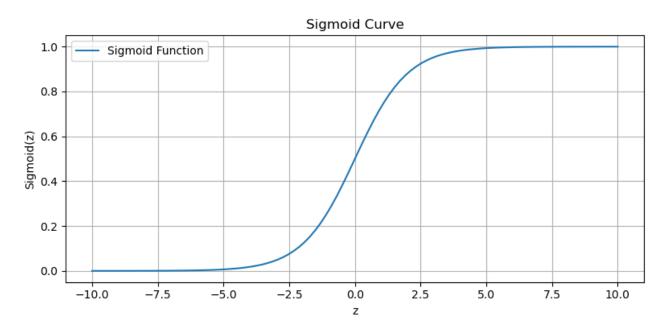
- ROC-AUC: 0.996

The following plots illustrate the model's performance and insights.

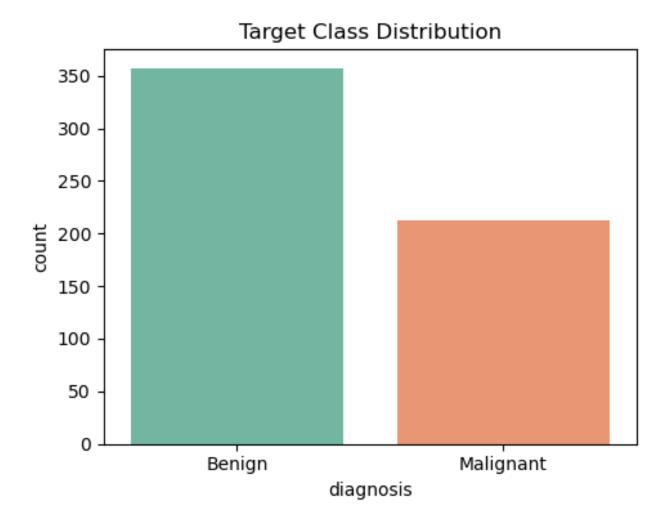
#### **ROC Curve**



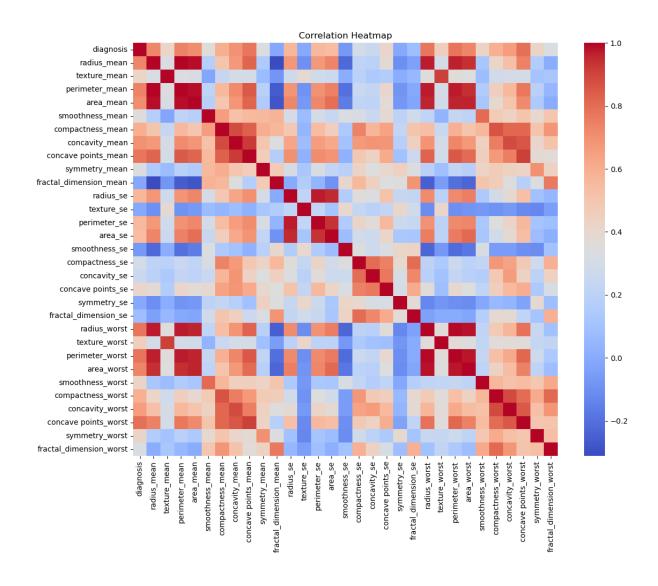
## **Sigmoid Function**



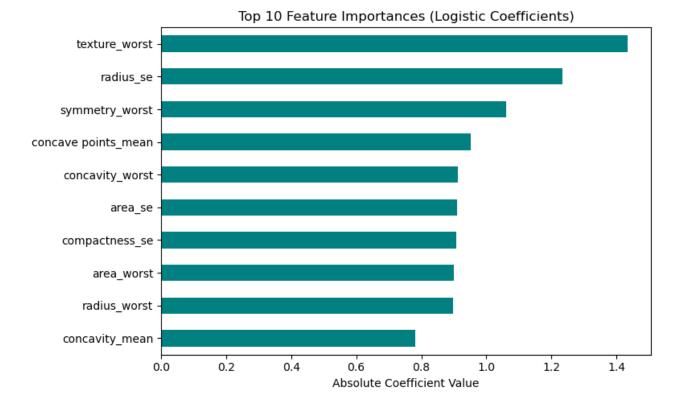
#### **Class Distribution**



### **Correlation Heatmap**



**Top Feature Importances** 



#### **Confusion Matrix**

