



# Breast Cancer Prediction

Faculty of Computers & Artificial Intelligence

Selected 1

Repository Link: <https://github.com/mahmoudhaney/BreastCancerPrediction>

## Team 15

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## Dataset Information

Name

## Breast Cancer Prediction

Classes

id	diagnosis	radius_mean	texture_mean	perimeter_mean	area_mean	smoothness_mean
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compactness_mean	concavity_mean	concave_points_mean	symmetry_mean
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fractal_dimension_mean	radius_se	texture_se	perimeter_se	area_se	smoothness_se
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compactness_se	concavity_se	concave_points_se	symmetry_se	fractal_dimension_se
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radius_worst	texture_worst	perimeter_worst	area_worst	smoothness_worst
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compactness_worst	concavity_worst	concave_points_worst
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symmetry_worst	fractal_dimension_worst
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**Total Dataset Columns**  **32 Columns**

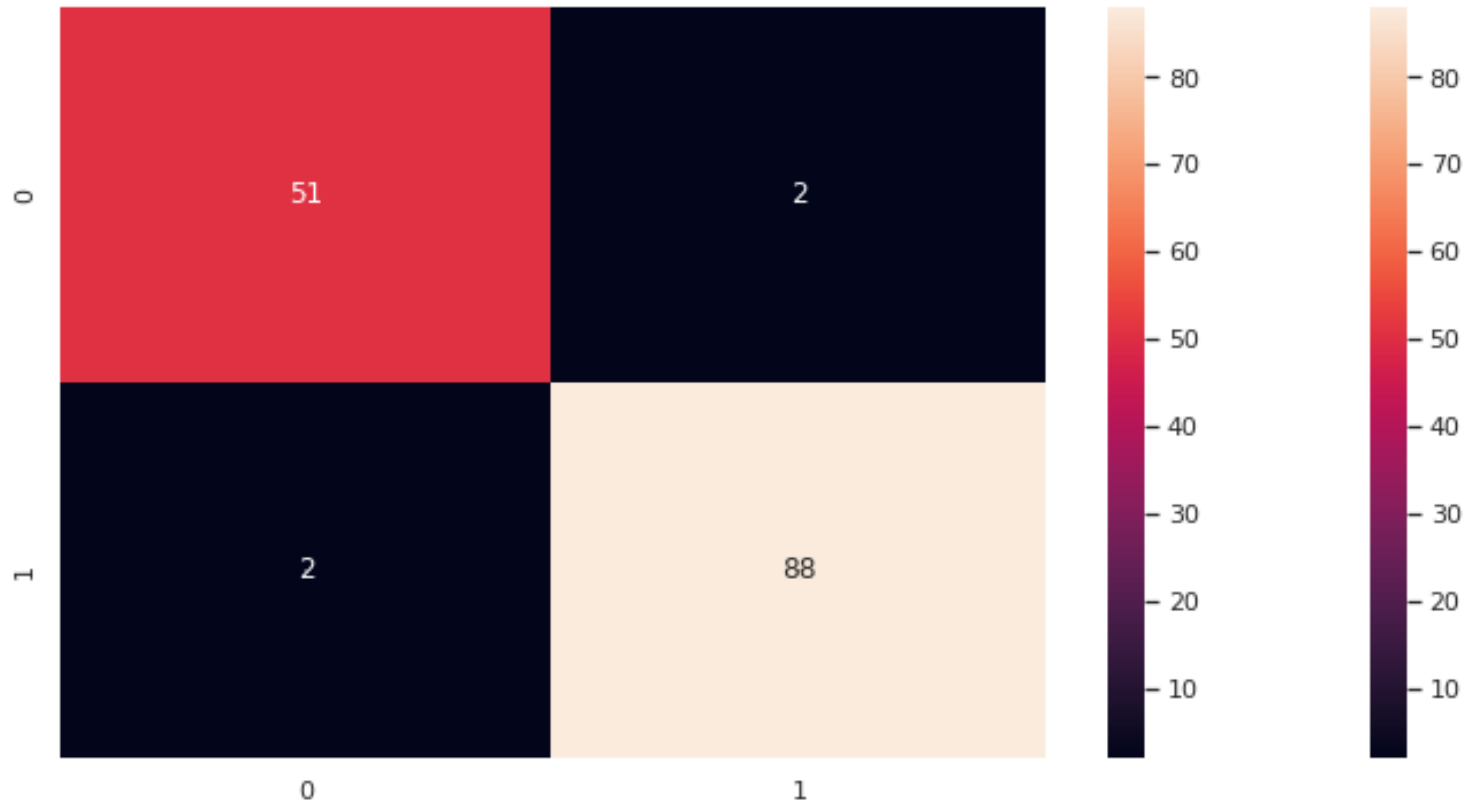
**Total Dataset Rows**  **570 Rows**

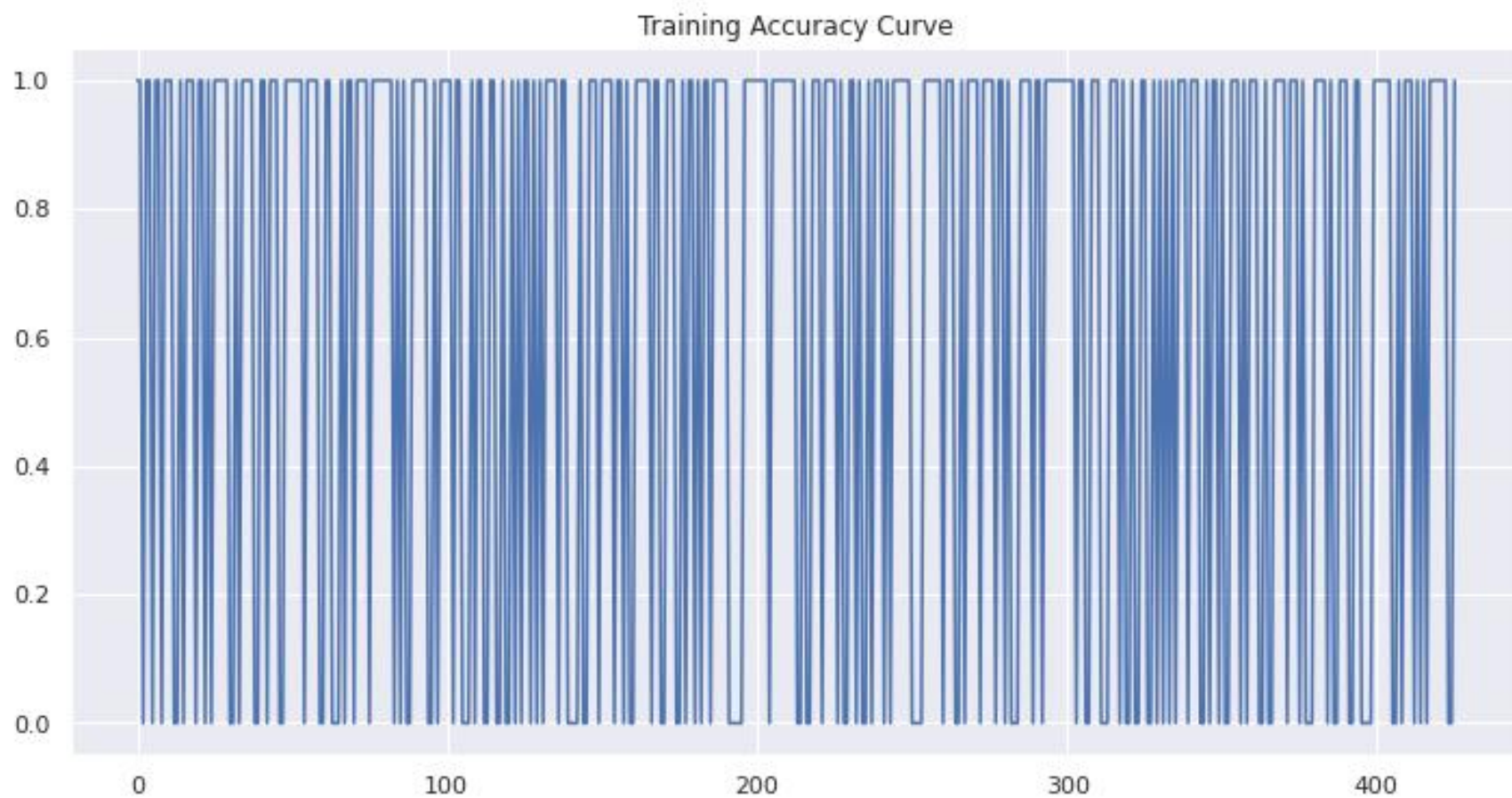
**Training Data**  **426**

**Validation Data**  **143**

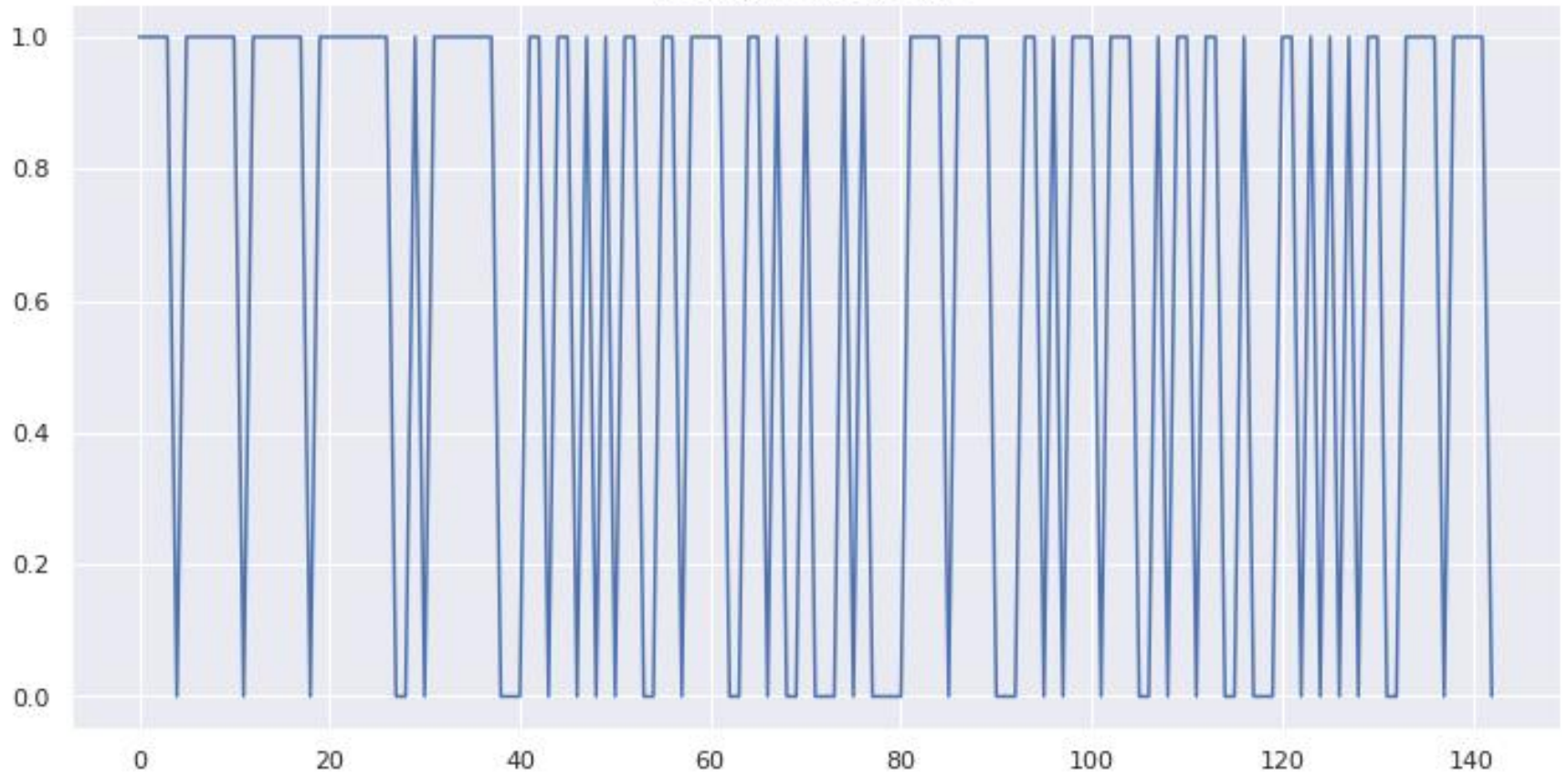
# Logistic Regression & SVM

Confusion Matrix

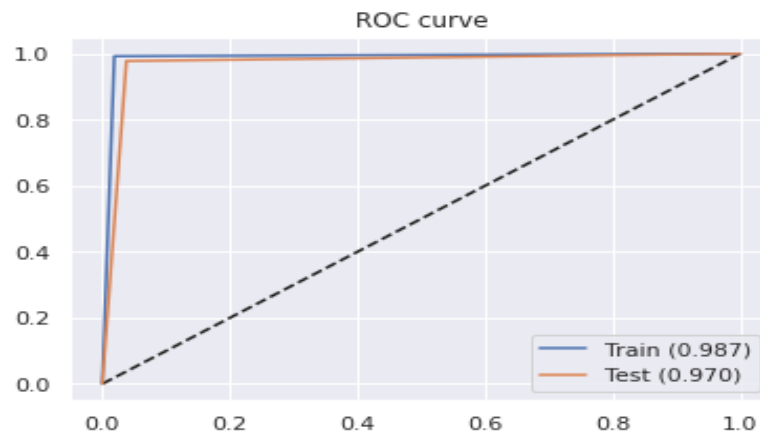
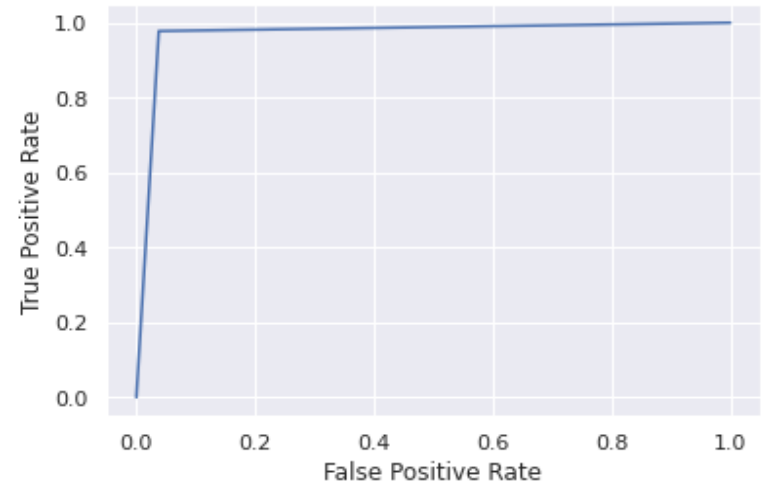
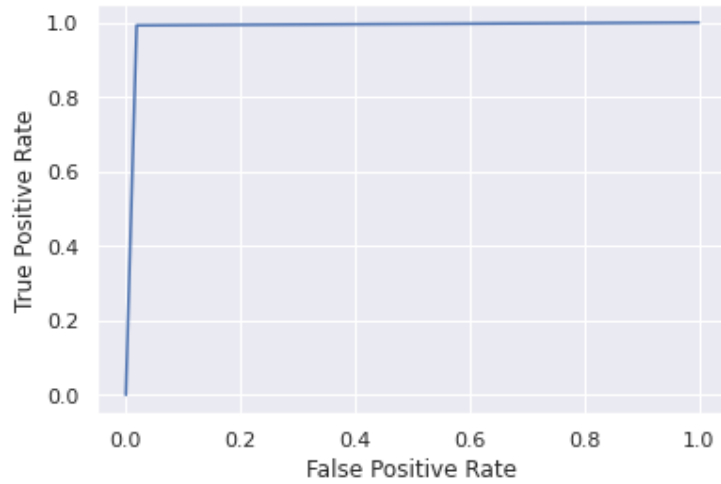




Testing Accuracy Curve



# ROC Curve

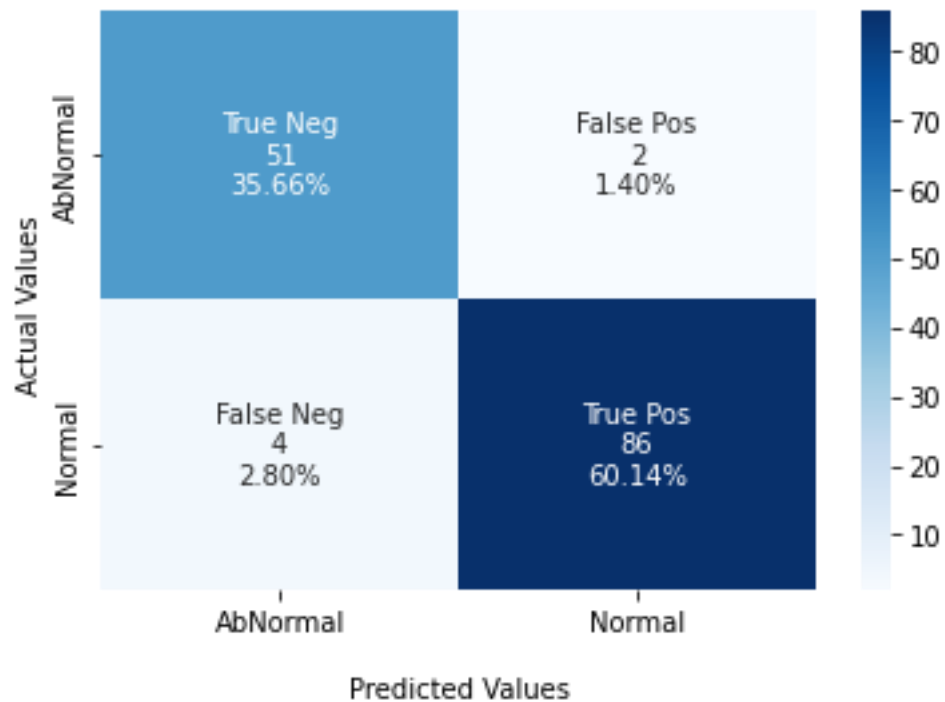




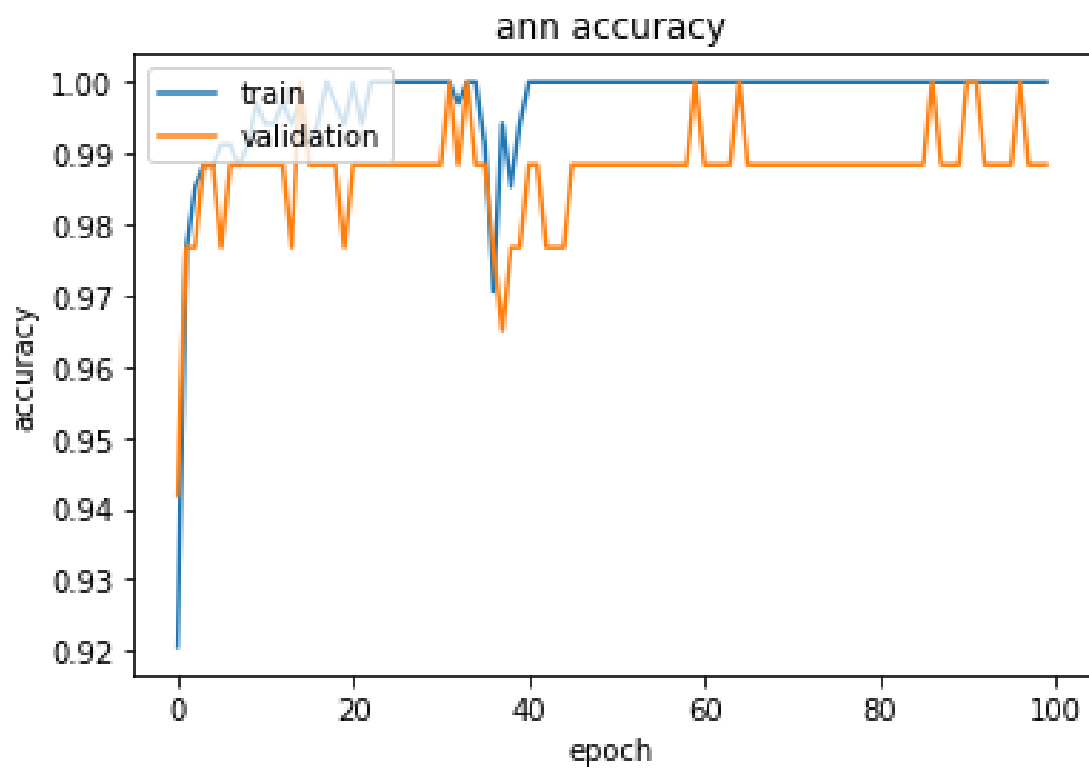
# ANN Model

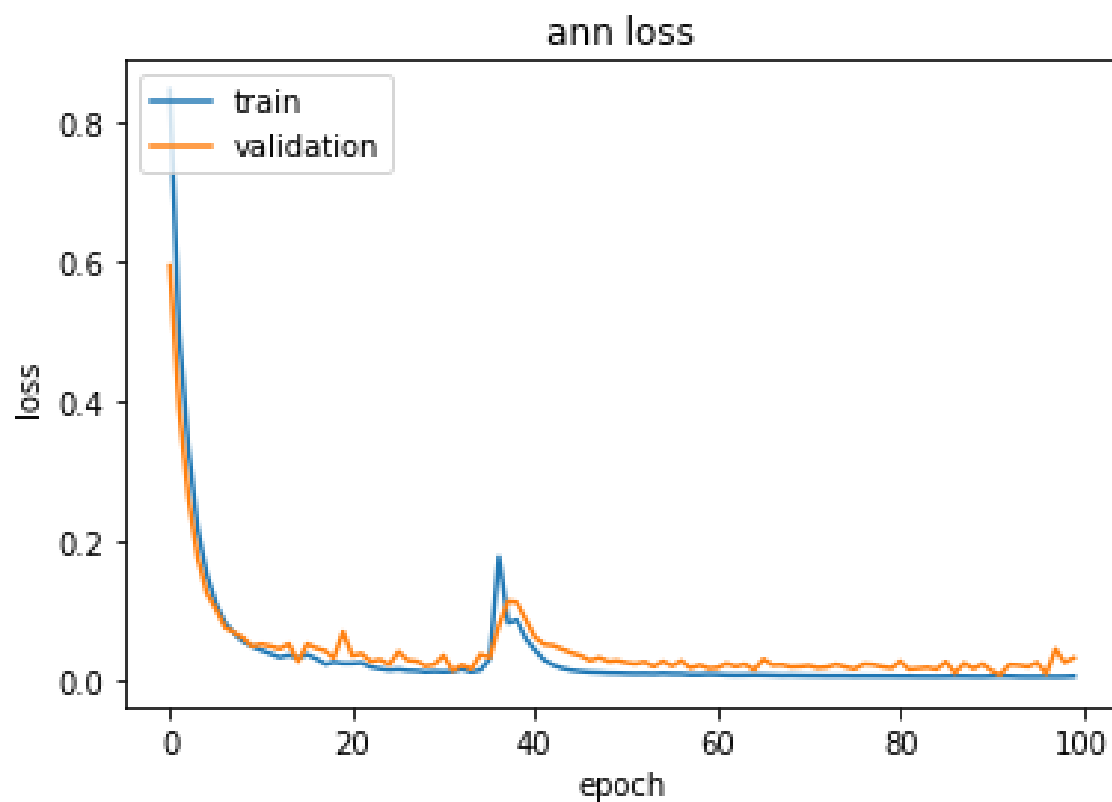
Confusion Matrix

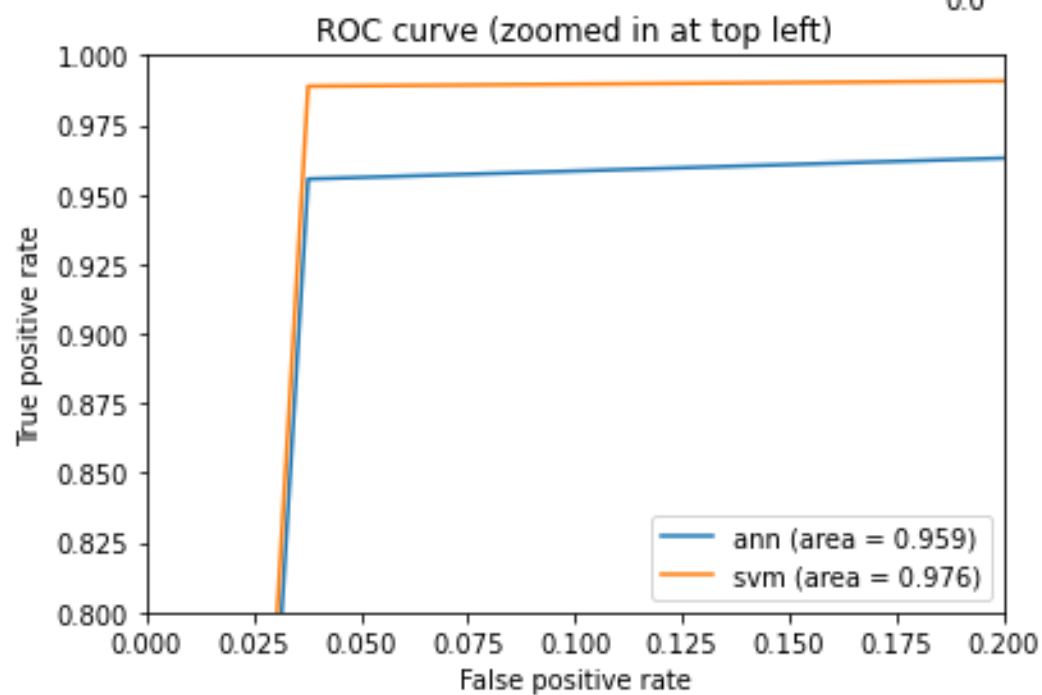
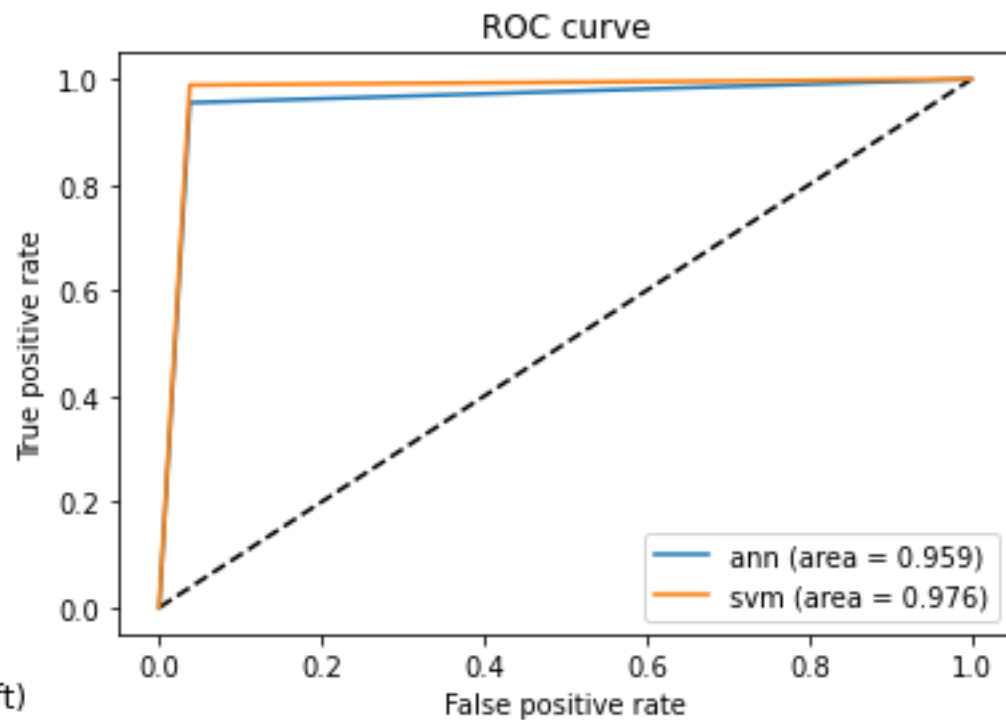
Seaborn Confusion Matrix with labels



# Accuracy Curve







# Hyperparameters

## SVM & Logistic Regression Models

Before

**Model Accuracy: 94%**

Without Standardization

Training Data: 60%

After

**Model Accuracy: 97%**

With Standardization (-1, 1)

Training Data: 75%