

```
In [1]: from sklearn import datasets           # import cancer dataset from
        from sklearn import svm              # Import SVM algorithm from s
        from sklearn.metrics import accuracy_score  # compute the accuracy of the
        from sklearn.model_selection import train_test_split  # splitting data into trainin
```

```
In [2]: #####
# This program will classify a tumor as malignant or benign using the supervised M
# algorithm, Support Vector Machines (SVM). The features that will be used to train
# model include:
# ['mean radius' 'mean texture' 'mean perimeter' 'mean area'
# 'mean smoothness' 'mean compactness' 'mean concavity'
# 'mean concave points' 'mean symmetry' 'mean fractal dimension'
# 'radius error' 'texture error' 'perimeter error' 'area error'
# 'smoothness error' 'compactness error' 'concavity error'
# 'concave points error' 'symmetry error' 'fractal dimension error'
# 'worst radius' 'worst texture' 'worst perimeter' 'worst area'
# 'worst smoothness' 'worst compactness' 'worst concavity'
# 'worst concave points' 'worst symmetry' 'worst fractal dimension']
#####

#####
# Step 1: Load the data and store the labels in variable x and target in variable y
#####
cancer_data = datasets.load_breast_cancer()

print("Features: \n", cancer_data.feature_names, "\n")
print("Targets: \n", cancer_data.target_names)

x = cancer_data.data
y = cancer_data.target

#####
# Step 2: Split the dataset into a training set and test set.
#         70% of the data should be for the training set.
#         30% of the data should be for the test set.
#####

x_train, x_test, y_train, y_test = train_test_split(x, y, test_size = 0.3)

classes = ['malignant', 'benign '] # 0 = malignant, 1 = benign

#####
# Step 3: Create the model.      #
#####

# SVC: Support Vector Classification
svm_model = svm.SVC(kernel="linear")

#####
# Step 4: Train the model.      #
#####
svm_model.fit(x_train, y_train)
```

```
#####  
# Step 5: Test the model.      #  
#####  
predicted = svm_model.predict(x_test)  
  
#####  
# Step 6: Evaluate the model.  #  
#####  
accuracy = accuracy_score(y_test, predicted) * 100  
  
print("\nAccuracy of the model is: " + str(round(accuracy, 2)) + "%\n")  
  
#####  
# Step 7: Print Results.      #  
#####  
for i in range(len(predicted)):  
    print("Predicted: ", classes[predicted[i]], "\nData: ", x_test[i], "\nActual: ",
```

Features:

```
['mean radius' 'mean texture' 'mean perimeter' 'mean area'
 'mean smoothness' 'mean compactness' 'mean concavity'
 'mean concave points' 'mean symmetry' 'mean fractal dimension'
 'radius error' 'texture error' 'perimeter error' 'area error'
 'smoothness error' 'compactness error' 'concavity error'
 'concave points error' 'symmetry error' 'fractal dimension error'
 'worst radius' 'worst texture' 'worst perimeter' 'worst area'
 'worst smoothness' 'worst compactness' 'worst concavity'
 'worst concave points' 'worst symmetry' 'worst fractal dimension']
```

Targets:

```
['malignant' 'benign']
```

Accuracy of the model is: 92.98%

Predicted: benign

```
Data: [1.294e+01 1.617e+01 8.318e+01 5.076e+02 9.879e-02 8.836e-02 3.296e-02
 2.390e-02 1.735e-01 6.200e-02 1.458e-01 9.050e-01 9.975e-01 1.136e+01
 2.887e-03 1.285e-02 1.613e-02 7.308e-03 1.870e-02 1.972e-03 1.386e+01
 2.302e+01 8.969e+01 5.809e+02 1.172e-01 1.958e-01 1.810e-01 8.388e-02
 3.297e-01 7.834e-02]
```

Actual: benign

Predicted: malignant

```
Data: [1.328e+01 2.028e+01 8.732e+01 5.452e+02 1.041e-01 1.436e-01 9.847e-02
 6.158e-02 1.974e-01 6.782e-02 3.704e-01 8.249e-01 2.427e+00 3.133e+01
 5.072e-03 2.147e-02 2.185e-02 9.560e-03 1.719e-02 3.317e-03 1.738e+01
 2.800e+01 1.131e+02 9.072e+02 1.530e-01 3.724e-01 3.664e-01 1.492e-01
 3.739e-01 1.027e-01]
```

Actual: malignant

Predicted: malignant

```
Data: [2.463e+01 2.160e+01 1.655e+02 1.841e+03 1.030e-01 2.106e-01 2.310e-01
 1.471e-01 1.991e-01 6.739e-02 9.915e-01 9.004e-01 7.050e+00 1.399e+02
 4.989e-03 3.212e-02 3.571e-02 1.597e-02 1.879e-02 4.760e-03 2.992e+01
 2.693e+01 2.057e+02 2.642e+03 1.342e-01 4.188e-01 4.658e-01 2.475e-01
 3.157e-01 9.671e-02]
```

Actual: malignant

Predicted: benign

```
Data: [1.210e+01 1.772e+01 7.807e+01 4.462e+02 1.029e-01 9.758e-02 4.783e-02
 3.326e-02 1.937e-01 6.161e-02 2.841e-01 1.652e+00 1.869e+00 2.222e+01
 8.146e-03 1.631e-02 1.843e-02 7.513e-03 2.015e-02 1.798e-03 1.356e+01
 2.580e+01 8.833e+01 5.595e+02 1.432e-01 1.773e-01 1.603e-01 6.266e-02
 3.049e-01 7.081e-02]
```

Actual: benign

Predicted: benign

```
Data: [1.388e+01 1.616e+01 8.837e+01 5.966e+02 7.026e-02 4.831e-02 2.045e-02
 8.507e-03 1.607e-01 5.474e-02 2.541e-01 6.218e-01 1.709e+00 2.312e+01
 3.728e-03 1.415e-02 1.988e-02 7.016e-03 1.647e-02 1.970e-03 1.551e+01
 1.997e+01 9.966e+01 7.453e+02 8.484e-02 1.233e-01 1.091e-01 4.537e-02
 2.542e-01 6.623e-02]
```

Actual: benign

Predicted: malignant

Data: [1.530e+01 2.527e+01 1.024e+02 7.324e+02 1.082e-01 1.697e-01 1.683e-01
8.751e-02 1.926e-01 6.540e-02 4.390e-01 1.012e+00 3.498e+00 4.350e+01
5.233e-03 3.057e-02 3.576e-02 1.083e-02 1.768e-02 2.967e-03 2.027e+01
3.671e+01 1.493e+02 1.269e+03 1.641e-01 6.110e-01 6.335e-01 2.024e-01
4.027e-01 9.876e-02]

Actual: malignant

Predicted: malignant

Data: [1.919e+01 1.594e+01 1.263e+02 1.157e+03 8.694e-02 1.185e-01 1.193e-01
9.667e-02 1.741e-01 5.176e-02 1.000e+00 6.336e-01 6.971e+00 1.193e+02
9.406e-03 3.055e-02 4.344e-02 2.794e-02 3.156e-02 3.362e-03 2.203e+01
1.781e+01 1.466e+02 1.495e+03 1.124e-01 2.016e-01 2.264e-01 1.777e-01
2.443e-01 6.251e-02]

Actual: malignant

Predicted: benign

Data: [1.571e+01 1.393e+01 1.020e+02 7.617e+02 9.462e-02 9.462e-02 7.135e-02
5.933e-02 1.816e-01 5.723e-02 3.117e-01 8.155e-01 1.972e+00 2.794e+01
5.217e-03 1.515e-02 1.678e-02 1.268e-02 1.669e-02 2.330e-03 1.750e+01
1.925e+01 1.143e+02 9.228e+02 1.223e-01 1.949e-01 1.709e-01 1.374e-01
2.723e-01 7.071e-02]

Actual: benign

Predicted: malignant

Data: [1.944e+01 1.882e+01 1.281e+02 1.167e+03 1.089e-01 1.448e-01 2.256e-01
1.194e-01 1.823e-01 6.115e-02 5.659e-01 1.408e+00 3.631e+00 6.774e+01
5.288e-03 2.833e-02 4.256e-02 1.176e-02 1.717e-02 3.211e-03 2.396e+01
3.039e+01 1.539e+02 1.740e+03 1.514e-01 3.725e-01 5.936e-01 2.060e-01
3.266e-01 9.009e-02]

Actual: malignant

Predicted: benign

Data: [1.176e+01 1.814e+01 7.500e+01 4.311e+02 9.968e-02 5.914e-02 2.685e-02
3.515e-02 1.619e-01 6.287e-02 6.450e-01 2.105e+00 4.138e+00 4.911e+01
5.596e-03 1.005e-02 1.272e-02 1.432e-02 1.575e-02 2.758e-03 1.336e+01
2.339e+01 8.510e+01 5.536e+02 1.137e-01 7.974e-02 6.120e-02 7.160e-02
1.978e-01 6.915e-02]

Actual: malignant

Predicted: benign

Data: [1.275e+01 1.670e+01 8.251e+01 4.938e+02 1.125e-01 1.117e-01 3.880e-02
2.995e-02 2.120e-01 6.623e-02 3.834e-01 1.003e+00 2.495e+00 2.862e+01
7.509e-03 1.561e-02 1.977e-02 9.199e-03 1.805e-02 3.629e-03 1.445e+01
2.174e+01 9.363e+01 6.241e+02 1.475e-01 1.979e-01 1.423e-01 8.045e-02
3.071e-01 8.557e-02]

Actual: benign

Predicted: benign

Data: [1.051e+01 2.019e+01 6.864e+01 3.342e+02 1.122e-01 1.303e-01 6.476e-02
3.068e-02 1.922e-01 7.782e-02 3.336e-01 1.860e+00 2.041e+00 1.991e+01
1.188e-02 3.747e-02 4.591e-02 1.544e-02 2.287e-02 6.792e-03 1.116e+01
2.275e+01 7.262e+01 3.744e+02 1.300e-01 2.049e-01 1.295e-01 6.136e-02
2.383e-01 9.026e-02]

Actual: benign

Predicted: benign

Data: [1.487e+01 2.021e+01 9.612e+01 6.809e+02 9.587e-02 8.345e-02 6.824e-02
4.951e-02 1.487e-01 5.748e-02 2.323e-01 1.636e+00 1.596e+00 2.184e+01
5.415e-03 1.371e-02 2.153e-02 1.183e-02 1.959e-02 1.812e-03 1.601e+01
2.848e+01 1.039e+02 7.836e+02 1.216e-01 1.388e-01 1.700e-01 1.017e-01
2.369e-01 6.599e-02]

Actual: benign

Predicted: malignant

Data: [1.425e+01 2.215e+01 9.642e+01 6.457e+02 1.049e-01 2.008e-01 2.135e-01
8.653e-02 1.949e-01 7.292e-02 7.036e-01 1.268e+00 5.373e+00 6.078e+01
9.407e-03 7.056e-02 6.899e-02 1.848e-02 1.700e-02 6.113e-03 1.767e+01
2.951e+01 1.191e+02 9.595e+02 1.640e-01 6.247e-01 6.922e-01 1.785e-01
2.844e-01 1.132e-01]

Actual: malignant

Predicted: benign

Data: [1.288e+01 2.892e+01 8.250e+01 5.143e+02 8.123e-02 5.824e-02 6.195e-02
2.343e-02 1.566e-01 5.708e-02 2.116e-01 1.360e+00 1.502e+00 1.683e+01
8.412e-03 2.153e-02 3.898e-02 7.620e-03 1.695e-02 2.801e-03 1.389e+01
3.574e+01 8.884e+01 5.957e+02 1.227e-01 1.620e-01 2.439e-01 6.493e-02
2.372e-01 7.242e-02]

Actual: benign

Predicted: benign

Data: [9.405e+00 2.170e+01 5.960e+01 2.712e+02 1.044e-01 6.159e-02 2.047e-02
1.257e-02 2.025e-01 6.601e-02 4.302e-01 2.878e+00 2.759e+00 2.517e+01
1.474e-02 1.674e-02 1.367e-02 8.674e-03 3.044e-02 4.590e-03 1.085e+01
3.124e+01 6.873e+01 3.594e+02 1.526e-01 1.193e-01 6.141e-02 3.770e-02
2.872e-01 8.304e-02]

Actual: benign

Predicted: malignant

Data: [1.953e+01 1.890e+01 1.295e+02 1.217e+03 1.150e-01 1.642e-01 2.197e-01
1.062e-01 1.792e-01 6.552e-02 1.111e+00 1.161e+00 7.237e+00 1.330e+02
6.056e-03 3.203e-02 5.638e-02 1.733e-02 1.884e-02 4.787e-03 2.593e+01
2.624e+01 1.711e+02 2.053e+03 1.495e-01 4.116e-01 6.121e-01 1.980e-01
2.968e-01 9.929e-02]

Actual: malignant

Predicted: benign

Data: [1.364e+01 1.560e+01 8.738e+01 5.753e+02 9.423e-02 6.630e-02 4.705e-02
3.731e-02 1.717e-01 5.660e-02 3.242e-01 6.612e-01 1.996e+00 2.719e+01
6.470e-03 1.248e-02 1.810e-02 1.103e-02 1.898e-02 1.794e-03 1.485e+01
1.905e+01 9.411e+01 6.834e+02 1.278e-01 1.291e-01 1.533e-01 9.222e-02
2.530e-01 6.510e-02]

Actual: benign

Predicted: benign

Data: [1.434e+01 1.347e+01 9.251e+01 6.412e+02 9.906e-02 7.624e-02 5.724e-02
4.603e-02 2.075e-01 5.448e-02 5.220e-01 8.121e-01 3.763e+00 4.829e+01
7.089e-03 1.428e-02 2.360e-02 1.286e-02 2.266e-02 1.463e-03 1.677e+01
1.690e+01 1.104e+02 8.732e+02 1.297e-01 1.525e-01 1.632e-01 1.087e-01
3.062e-01 6.072e-02]

Actual: benign

Predicted: malignant
Data: [1.940e+01 1.818e+01 1.272e+02 1.145e+03 1.037e-01 1.442e-01 1.626e-01
9.464e-02 1.893e-01 5.892e-02 4.709e-01 9.951e-01 2.903e+00 5.316e+01
5.654e-03 2.199e-02 3.059e-02 1.499e-02 1.623e-02 1.965e-03 2.379e+01
2.865e+01 1.524e+02 1.628e+03 1.518e-01 3.749e-01 4.316e-01 2.252e-01
3.590e-01 7.787e-02]
Actual: malignant

Predicted: malignant
Data: [1.602e+01 2.324e+01 1.027e+02 7.978e+02 8.206e-02 6.669e-02 3.299e-02
3.323e-02 1.528e-01 5.697e-02 3.795e-01 1.187e+00 2.466e+00 4.051e+01
4.029e-03 9.269e-03 1.101e-02 7.591e-03 1.460e-02 3.042e-03 1.919e+01
3.388e+01 1.238e+02 1.150e+03 1.181e-01 1.551e-01 1.459e-01 9.975e-02
2.948e-01 8.452e-02]
Actual: malignant

Predicted: malignant
Data: [1.136e+01 1.757e+01 7.249e+01 3.998e+02 8.858e-02 5.313e-02 2.783e-02
2.100e-02 1.601e-01 5.913e-02 1.916e-01 1.555e+00 1.359e+00 1.366e+01
5.391e-03 9.947e-03 1.163e-02 5.872e-03 1.341e-02 1.659e-03 1.305e+01
3.632e+01 8.507e+01 5.213e+02 1.453e-01 1.622e-01 1.811e-01 8.698e-02
2.973e-01 7.745e-02]
Actual: benign

Predicted: malignant
Data: [1.775e+01 2.803e+01 1.173e+02 9.816e+02 9.997e-02 1.314e-01 1.698e-01
8.293e-02 1.713e-01 5.916e-02 3.897e-01 1.077e+00 2.873e+00 4.395e+01
4.714e-03 2.015e-02 3.697e-02 1.110e-02 1.237e-02 2.556e-03 2.153e+01
3.854e+01 1.454e+02 1.437e+03 1.401e-01 3.762e-01 6.399e-01 1.970e-01
2.972e-01 9.075e-02]
Actual: malignant

Predicted: malignant
Data: [1.546e+01 2.395e+01 1.038e+02 7.313e+02 1.183e-01 1.870e-01 2.030e-01
8.520e-02 1.807e-01 7.083e-02 3.331e-01 1.961e+00 2.937e+00 3.252e+01
9.538e-03 4.940e-02 6.019e-02 2.041e-02 2.105e-02 6.000e-03 1.711e+01
3.633e+01 1.177e+02 9.094e+02 1.732e-01 4.967e-01 5.911e-01 2.163e-01
3.013e-01 1.067e-01]
Actual: malignant

Predicted: malignant
Data: [1.534e+01 1.426e+01 1.025e+02 7.044e+02 1.073e-01 2.135e-01 2.077e-01
9.756e-02 2.521e-01 7.032e-02 4.388e-01 7.096e-01 3.384e+00 4.491e+01
6.789e-03 5.328e-02 6.446e-02 2.252e-02 3.672e-02 4.394e-03 1.807e+01
1.908e+01 1.251e+02 9.809e+02 1.390e-01 5.954e-01 6.305e-01 2.393e-01
4.667e-01 9.946e-02]
Actual: malignant

Predicted: benign
Data: [1.243e+01 1.700e+01 7.860e+01 4.773e+02 7.557e-02 3.454e-02 1.342e-02
1.699e-02 1.472e-01 5.561e-02 3.778e-01 2.200e+00 2.487e+00 3.116e+01
7.357e-03 1.079e-02 9.959e-03 1.120e-02 3.433e-02 2.961e-03 1.290e+01
2.021e+01 8.176e+01 5.159e+02 8.409e-02 4.712e-02 2.237e-02 2.832e-02
1.901e-01 5.932e-02]
Actual: benign

Predicted: benign

Data: [1.161e+01 1.602e+01 7.546e+01 4.082e+02 1.088e-01 1.168e-01 7.097e-02
4.497e-02 1.886e-01 6.320e-02 2.456e-01 7.339e-01 1.667e+00 1.589e+01
5.884e-03 2.005e-02 2.631e-02 1.304e-02 1.848e-02 1.982e-03 1.264e+01
1.967e+01 8.193e+01 4.757e+02 1.415e-01 2.170e-01 2.302e-01 1.105e-01
2.787e-01 7.427e-02]

Actual: benign

Predicted: benign

Data: [1.459e+01 2.268e+01 9.639e+01 6.571e+02 8.473e-02 1.330e-01 1.029e-01
3.736e-02 1.454e-01 6.147e-02 2.254e-01 1.108e+00 2.224e+00 1.954e+01
4.242e-03 4.639e-02 6.578e-02 1.606e-02 1.638e-02 4.406e-03 1.548e+01
2.727e+01 1.059e+02 7.335e+02 1.026e-01 3.171e-01 3.662e-01 1.105e-01
2.258e-01 8.004e-02]

Actual: benign

Predicted: benign

Data: [1.008e+01 1.511e+01 6.376e+01 3.175e+02 9.267e-02 4.695e-02 1.597e-03
2.404e-03 1.703e-01 6.048e-02 4.245e-01 1.268e+00 2.680e+00 2.643e+01
1.439e-02 1.200e-02 1.597e-03 2.404e-03 2.538e-02 3.470e-03 1.187e+01
2.118e+01 7.539e+01 4.370e+02 1.521e-01 1.019e-01 6.920e-03 1.042e-02
2.933e-01 7.697e-02]

Actual: benign

Predicted: malignant

Data: [2.522e+01 2.491e+01 1.715e+02 1.878e+03 1.063e-01 2.665e-01 3.339e-01
1.845e-01 1.829e-01 6.782e-02 8.973e-01 1.474e+00 7.382e+00 1.200e+02
8.166e-03 5.693e-02 5.730e-02 2.030e-02 1.065e-02 5.893e-03 3.000e+01
3.362e+01 2.117e+02 2.562e+03 1.573e-01 6.076e-01 6.476e-01 2.867e-01
2.355e-01 1.051e-01]

Actual: malignant

Predicted: benign

Data: [1.385e+01 1.960e+01 8.868e+01 5.926e+02 8.684e-02 6.330e-02 1.342e-02
2.293e-02 1.555e-01 5.673e-02 3.419e-01 1.678e+00 2.331e+00 2.963e+01
5.836e-03 1.095e-02 5.812e-03 7.039e-03 2.014e-02 2.326e-03 1.563e+01
2.801e+01 1.009e+02 7.491e+02 1.118e-01 1.141e-01 4.753e-02 5.890e-02
2.513e-01 6.911e-02]

Actual: benign

Predicted: benign

Data: [1.362e+01 2.323e+01 8.719e+01 5.732e+02 9.246e-02 6.747e-02 2.974e-02
2.443e-02 1.664e-01 5.801e-02 3.460e-01 1.336e+00 2.066e+00 3.124e+01
5.868e-03 2.099e-02 2.021e-02 9.064e-03 2.087e-02 2.583e-03 1.535e+01
2.909e+01 9.758e+01 7.298e+02 1.216e-01 1.517e-01 1.049e-01 7.174e-02
2.642e-01 6.953e-02]

Actual: benign

Predicted: benign

Data: [1.366e+01 1.913e+01 8.946e+01 5.753e+02 9.057e-02 1.147e-01 9.657e-02
4.812e-02 1.848e-01 6.181e-02 2.244e-01 8.950e-01 1.804e+00 1.936e+01
3.980e-03 2.809e-02 3.669e-02 1.274e-02 1.581e-02 3.956e-03 1.514e+01
2.550e+01 1.014e+02 7.088e+02 1.147e-01 3.167e-01 3.660e-01 1.407e-01
2.744e-01 8.839e-02]

Actual: benign

Predicted: benign

Data: [1.426e+01 1.817e+01 9.122e+01 6.331e+02 6.576e-02 5.220e-02 2.475e-02
1.374e-02 1.635e-01 5.586e-02 2.300e-01 6.690e-01 1.661e+00 2.056e+01
3.169e-03 1.377e-02 1.079e-02 5.243e-03 1.103e-02 1.957e-03 1.622e+01
2.526e+01 1.058e+02 8.197e+02 9.445e-02 2.167e-01 1.565e-01 7.530e-02
2.636e-01 7.676e-02]

Actual: benign

Predicted: benign

Data: [1.189e+01 1.736e+01 7.620e+01 4.356e+02 1.225e-01 7.210e-02 5.929e-02
7.404e-02 2.015e-01 5.875e-02 6.412e-01 2.293e+00 4.021e+00 4.884e+01
1.418e-02 1.489e-02 1.267e-02 1.910e-02 2.678e-02 3.002e-03 1.240e+01
1.899e+01 7.946e+01 4.724e+02 1.359e-01 8.368e-02 7.153e-02 8.946e-02
2.220e-01 6.033e-02]

Actual: benign

Predicted: benign

Data: [1.141e+01 1.492e+01 7.353e+01 4.020e+02 9.059e-02 8.155e-02 6.181e-02
2.361e-02 1.167e-01 6.217e-02 3.344e-01 1.108e+00 1.902e+00 2.277e+01
7.356e-03 3.728e-02 5.915e-02 1.712e-02 2.165e-02 4.784e-03 1.237e+01
1.770e+01 7.912e+01 4.672e+02 1.121e-01 1.610e-01 1.648e-01 6.296e-02
1.811e-01 7.427e-02]

Actual: benign

Predicted: malignant

Data: [1.425e+01 2.172e+01 9.363e+01 6.330e+02 9.823e-02 1.098e-01 1.319e-01
5.598e-02 1.885e-01 6.125e-02 2.860e-01 1.019e+00 2.657e+00 2.491e+01
5.878e-03 2.995e-02 4.815e-02 1.161e-02 2.028e-02 4.022e-03 1.589e+01
3.036e+01 1.162e+02 7.996e+02 1.446e-01 4.238e-01 5.186e-01 1.447e-01
3.591e-01 1.014e-01]

Actual: malignant

Predicted: benign

Data: [1.162e+01 1.818e+01 7.638e+01 4.088e+02 1.175e-01 1.483e-01 1.020e-01
5.564e-02 1.957e-01 7.255e-02 4.101e-01 1.740e+00 3.027e+00 2.785e+01
1.459e-02 3.206e-02 4.961e-02 1.841e-02 1.807e-02 5.217e-03 1.336e+01
2.540e+01 8.814e+01 5.281e+02 1.780e-01 2.878e-01 3.186e-01 1.416e-01
2.660e-01 9.270e-02]

Actual: benign

Predicted: malignant

Data: [2.309e+01 1.983e+01 1.521e+02 1.682e+03 9.342e-02 1.275e-01 1.676e-01
1.003e-01 1.505e-01 5.484e-02 1.291e+00 7.452e-01 9.635e+00 1.802e+02
5.753e-03 3.356e-02 3.976e-02 2.156e-02 2.201e-02 2.897e-03 3.079e+01
2.387e+01 2.115e+02 2.782e+03 1.199e-01 3.625e-01 3.794e-01 2.264e-01
2.908e-01 7.277e-02]

Actual: malignant

Predicted: benign

Data: [1.499e+01 2.520e+01 9.554e+01 6.988e+02 9.387e-02 5.131e-02 2.398e-02
2.899e-02 1.565e-01 5.504e-02 1.214e+00 2.188e+00 8.077e+00 1.060e+02
6.883e-03 1.094e-02 1.818e-02 1.917e-02 7.882e-03 1.754e-03 1.499e+01
2.520e+01 9.554e+01 6.988e+02 9.387e-02 5.131e-02 2.398e-02 2.899e-02
1.565e-01 5.504e-02]

Actual: malignant

Predicted: malignant

Data: [1.561e+01 1.938e+01 1.000e+02 7.586e+02 7.840e-02 5.616e-02 4.209e-02
2.847e-02 1.547e-01 5.443e-02 2.298e-01 9.988e-01 1.534e+00 2.218e+01
2.826e-03 9.105e-03 1.311e-02 5.174e-03 1.013e-02 1.345e-03 1.791e+01
3.167e+01 1.159e+02 9.886e+02 1.084e-01 1.807e-01 2.260e-01 8.568e-02
2.683e-01 6.829e-02]

Actual: malignant

Predicted: benign

Data: [1.387e+01 2.070e+01 8.977e+01 5.848e+02 9.578e-02 1.018e-01 3.688e-02
2.369e-02 1.620e-01 6.688e-02 2.720e-01 1.047e+00 2.076e+00 2.312e+01
6.298e-03 2.172e-02 2.615e-02 9.061e-03 1.490e-02 3.599e-03 1.505e+01
2.475e+01 9.917e+01 6.886e+02 1.264e-01 2.037e-01 1.377e-01 6.845e-02
2.249e-01 8.492e-02]

Actual: benign

Predicted: malignant

Data: [2.009e+01 2.386e+01 1.347e+02 1.247e+03 1.080e-01 1.838e-01 2.283e-01
1.280e-01 2.249e-01 7.469e-02 1.072e+00 1.743e+00 7.804e+00 1.308e+02
7.964e-03 4.732e-02 7.649e-02 1.936e-02 2.736e-02 5.928e-03 2.368e+01
2.943e+01 1.588e+02 1.696e+03 1.347e-01 3.391e-01 4.932e-01 1.923e-01
3.294e-01 9.469e-02]

Actual: malignant

Predicted: malignant

Data: [1.508e+01 2.574e+01 9.800e+01 7.166e+02 1.024e-01 9.769e-02 1.235e-01
6.553e-02 1.647e-01 6.464e-02 6.534e-01 1.506e+00 4.174e+00 6.337e+01
1.052e-02 2.431e-02 4.912e-02 1.746e-02 2.120e-02 4.867e-03 1.851e+01
3.322e+01 1.212e+02 1.050e+03 1.660e-01 2.356e-01 4.029e-01 1.526e-01
2.654e-01 9.438e-02]

Actual: malignant

Predicted: benign

Data: [1.114e+01 1.407e+01 7.124e+01 3.846e+02 7.274e-02 6.064e-02 4.505e-02
1.471e-02 1.690e-01 6.083e-02 4.222e-01 8.092e-01 3.330e+00 2.884e+01
5.541e-03 3.387e-02 4.505e-02 1.471e-02 3.102e-02 4.831e-03 1.212e+01
1.582e+01 7.962e+01 4.535e+02 8.864e-02 1.256e-01 1.201e-01 3.922e-02
2.576e-01 7.018e-02]

Actual: benign

Predicted: benign

Data: [1.170e+01 1.911e+01 7.433e+01 4.187e+02 8.814e-02 5.253e-02 1.583e-02
1.148e-02 1.936e-01 6.128e-02 1.601e-01 1.430e+00 1.109e+00 1.128e+01
6.064e-03 9.110e-03 1.042e-02 7.638e-03 2.349e-02 1.661e-03 1.261e+01
2.655e+01 8.092e+01 4.831e+02 1.223e-01 1.087e-01 7.915e-02 5.741e-02
3.487e-01 6.958e-02]

Actual: benign

Predicted: benign

Data: [1.218e+01 2.052e+01 7.722e+01 4.587e+02 8.013e-02 4.038e-02 2.383e-02
1.770e-02 1.739e-01 5.677e-02 1.924e-01 1.571e+00 1.183e+00 1.468e+01
5.080e-03 6.098e-03 1.069e-02 6.797e-03 1.447e-02 1.532e-03 1.334e+01
3.284e+01 8.458e+01 5.478e+02 1.123e-01 8.862e-02 1.145e-01 7.431e-02
2.694e-01 6.878e-02]

Actual: benign

Predicted: benign

Data: [1.402e+01 1.566e+01 8.959e+01 6.065e+02 7.966e-02 5.581e-02 2.087e-02
2.652e-02 1.589e-01 5.586e-02 2.142e-01 6.549e-01 1.606e+00 1.925e+01
4.837e-03 9.238e-03 9.213e-03 1.076e-02 1.171e-02 2.104e-03 1.491e+01
1.931e+01 9.653e+01 6.889e+02 1.034e-01 1.017e-01 6.260e-02 8.216e-02
2.136e-01 6.710e-02]

Actual: benign

Predicted: benign

Data: [1.320e+01 1.582e+01 8.407e+01 5.373e+02 8.511e-02 5.251e-02 1.461e-03
3.261e-03 1.632e-01 5.894e-02 1.903e-01 5.735e-01 1.204e+00 1.550e+01
3.632e-03 7.861e-03 1.128e-03 2.386e-03 1.344e-02 2.585e-03 1.441e+01
2.045e+01 9.200e+01 6.369e+02 1.128e-01 1.346e-01 1.120e-02 2.500e-02
2.651e-01 8.385e-02]

Actual: benign

Predicted: benign

Data: [1.142e+01 2.038e+01 7.758e+01 3.861e+02 1.425e-01 2.839e-01 2.414e-01
1.052e-01 2.597e-01 9.744e-02 4.956e-01 1.156e+00 3.445e+00 2.723e+01
9.110e-03 7.458e-02 5.661e-02 1.867e-02 5.963e-02 9.208e-03 1.491e+01
2.650e+01 9.887e+01 5.677e+02 2.098e-01 8.663e-01 6.869e-01 2.575e-01
6.638e-01 1.730e-01]

Actual: malignant

Predicted: malignant

Data: [2.029e+01 1.434e+01 1.351e+02 1.297e+03 1.003e-01 1.328e-01 1.980e-01
1.043e-01 1.809e-01 5.883e-02 7.572e-01 7.813e-01 5.438e+00 9.444e+01
1.149e-02 2.461e-02 5.688e-02 1.885e-02 1.756e-02 5.115e-03 2.254e+01
1.667e+01 1.522e+02 1.575e+03 1.374e-01 2.050e-01 4.000e-01 1.625e-01
2.364e-01 7.678e-02]

Actual: malignant

Predicted: benign

Data: [1.227e+01 1.792e+01 7.841e+01 4.661e+02 8.685e-02 6.526e-02 3.211e-02
2.653e-02 1.966e-01 5.597e-02 3.342e-01 1.781e+00 2.079e+00 2.579e+01
5.888e-03 2.310e-02 2.059e-02 1.075e-02 2.578e-02 2.267e-03 1.410e+01
2.888e+01 8.900e+01 6.102e+02 1.240e-01 1.795e-01 1.377e-01 9.532e-02
3.455e-01 6.896e-02]

Actual: benign

Predicted: benign

Data: [1.486e+01 2.321e+01 1.004e+02 6.714e+02 1.044e-01 1.980e-01 1.697e-01
8.878e-02 1.737e-01 6.672e-02 2.796e-01 9.622e-01 3.591e+00 2.520e+01
8.081e-03 5.122e-02 5.551e-02 1.883e-02 2.545e-02 4.312e-03 1.608e+01
2.778e+01 1.186e+02 7.847e+02 1.316e-01 4.648e-01 4.589e-01 1.727e-01
3.000e-01 8.701e-02]

Actual: malignant

Predicted: benign

Data: [1.026e+01 1.471e+01 6.620e+01 3.216e+02 9.882e-02 9.159e-02 3.581e-02
2.037e-02 1.633e-01 7.005e-02 3.380e-01 2.509e+00 2.394e+00 1.933e+01
1.736e-02 4.671e-02 2.611e-02 1.296e-02 3.675e-02 6.758e-03 1.088e+01
1.948e+01 7.089e+01 3.571e+02 1.360e-01 1.636e-01 7.162e-02 4.074e-02
2.434e-01 8.488e-02]

Actual: benign

Predicted: benign

Data: [1.129e+01 1.304e+01 7.223e+01 3.880e+02 9.834e-02 7.608e-02 3.265e-02
2.755e-02 1.769e-01 6.270e-02 1.904e-01 5.293e-01 1.164e+00 1.317e+01
6.472e-03 1.122e-02 1.282e-02 8.849e-03 1.692e-02 2.817e-03 1.232e+01
1.618e+01 7.827e+01 4.575e+02 1.358e-01 1.507e-01 1.275e-01 8.750e-02
2.733e-01 8.022e-02]

Actual: benign

Predicted: benign

Data: [1.308e+01 1.571e+01 8.563e+01 5.200e+02 1.075e-01 1.270e-01 4.568e-02
3.110e-02 1.967e-01 6.811e-02 1.852e-01 7.477e-01 1.383e+00 1.467e+01
4.097e-03 1.898e-02 1.698e-02 6.490e-03 1.678e-02 2.425e-03 1.450e+01
2.049e+01 9.609e+01 6.305e+02 1.312e-01 2.776e-01 1.890e-01 7.283e-02
3.184e-01 8.183e-02]

Actual: benign

Predicted: benign

Data: [1.003e+01 2.128e+01 6.319e+01 3.073e+02 8.117e-02 3.912e-02 2.470e-03
5.159e-03 1.630e-01 6.439e-02 1.851e-01 1.341e+00 1.184e+00 1.160e+01
5.724e-03 5.697e-03 2.074e-03 3.527e-03 1.445e-02 2.411e-03 1.111e+01
2.894e+01 6.992e+01 3.763e+02 1.126e-01 7.094e-02 1.235e-02 2.579e-02
2.349e-01 8.061e-02]

Actual: benign

Predicted: malignant

Data: [1.719e+01 2.207e+01 1.116e+02 9.283e+02 9.726e-02 8.995e-02 9.061e-02
6.527e-02 1.867e-01 5.580e-02 4.203e-01 7.383e-01 2.819e+00 4.542e+01
4.493e-03 1.206e-02 2.048e-02 9.875e-03 1.144e-02 1.575e-03 2.158e+01
2.933e+01 1.405e+02 1.436e+03 1.558e-01 2.567e-01 3.889e-01 1.984e-01
3.216e-01 7.570e-02]

Actual: malignant

Predicted: malignant

Data: [1.607e+01 1.965e+01 1.041e+02 8.177e+02 9.168e-02 8.424e-02 9.769e-02
6.638e-02 1.798e-01 5.391e-02 7.474e-01 1.016e+00 5.029e+00 7.925e+01
1.082e-02 2.203e-02 3.500e-02 1.809e-02 1.550e-02 1.948e-03 1.977e+01
2.456e+01 1.288e+02 1.223e+03 1.500e-01 2.045e-01 2.829e-01 1.520e-01
2.650e-01 6.387e-02]

Actual: malignant

Predicted: malignant

Data: [2.026e+01 2.303e+01 1.324e+02 1.264e+03 9.078e-02 1.313e-01 1.465e-01
8.683e-02 2.095e-01 5.649e-02 7.576e-01 1.509e+00 4.554e+00 8.787e+01
6.016e-03 3.482e-02 4.232e-02 1.269e-02 2.657e-02 4.411e-03 2.422e+01
3.159e+01 1.561e+02 1.750e+03 1.190e-01 3.539e-01 4.098e-01 1.573e-01
3.689e-01 8.368e-02]

Actual: malignant

Predicted: malignant

Data: [2.060e+01 2.933e+01 1.401e+02 1.265e+03 1.178e-01 2.770e-01 3.514e-01
1.520e-01 2.397e-01 7.016e-02 7.260e-01 1.595e+00 5.772e+00 8.622e+01
6.522e-03 6.158e-02 7.117e-02 1.664e-02 2.324e-02 6.185e-03 2.574e+01
3.942e+01 1.846e+02 1.821e+03 1.650e-01 8.681e-01 9.387e-01 2.650e-01
4.087e-01 1.240e-01]

Actual: malignant

Predicted: benign

Data: [1.245e+01 1.641e+01 8.285e+01 4.767e+02 9.514e-02 1.511e-01 1.544e-01
4.846e-02 2.082e-01 7.325e-02 3.921e-01 1.207e+00 5.004e+00 3.019e+01
7.234e-03 7.471e-02 1.114e-01 2.721e-02 3.232e-02 9.627e-03 1.378e+01
2.103e+01 9.782e+01 5.806e+02 1.175e-01 4.061e-01 4.896e-01 1.342e-01
3.231e-01 1.034e-01]

Actual: benign

Predicted: malignant

Data: [1.953e+01 3.247e+01 1.280e+02 1.223e+03 8.420e-02 1.130e-01 1.145e-01
6.637e-02 1.428e-01 5.313e-02 7.392e-01 1.321e+00 4.722e+00 1.099e+02
5.539e-03 2.644e-02 2.664e-02 1.078e-02 1.332e-02 2.256e-03 2.790e+01
4.541e+01 1.802e+02 2.477e+03 1.408e-01 4.097e-01 3.995e-01 1.625e-01
2.713e-01 7.568e-02]

Actual: malignant

Predicted: malignant

Data: [1.442e+01 1.977e+01 9.448e+01 6.425e+02 9.752e-02 1.141e-01 9.388e-02
5.839e-02 1.879e-01 6.390e-02 2.895e-01 1.851e+00 2.376e+00 2.685e+01
8.005e-03 2.895e-02 3.321e-02 1.424e-02 1.462e-02 4.452e-03 1.633e+01
3.086e+01 1.095e+02 8.264e+02 1.431e-01 3.026e-01 3.194e-01 1.565e-01
2.718e-01 9.353e-02]

Actual: malignant

Predicted: malignant

Data: [1.730e+01 1.708e+01 1.130e+02 9.282e+02 1.008e-01 1.041e-01 1.266e-01
8.353e-02 1.813e-01 5.613e-02 3.093e-01 8.568e-01 2.193e+00 3.363e+01
4.757e-03 1.503e-02 2.332e-02 1.262e-02 1.394e-02 2.362e-03 1.985e+01
2.509e+01 1.309e+02 1.222e+03 1.416e-01 2.405e-01 3.378e-01 1.857e-01
3.138e-01 8.113e-02]

Actual: malignant

Predicted: malignant

Data: [1.398e+01 1.962e+01 9.112e+01 5.995e+02 1.060e-01 1.133e-01 1.126e-01
6.463e-02 1.669e-01 6.544e-02 2.208e-01 9.533e-01 1.602e+00 1.885e+01
5.314e-03 1.791e-02 2.185e-02 9.567e-03 1.223e-02 2.846e-03 1.704e+01
3.080e+01 1.139e+02 8.693e+02 1.613e-01 3.568e-01 4.069e-01 1.827e-01
3.179e-01 1.055e-01]

Actual: malignant

Predicted: malignant

Data: [1.822e+01 1.870e+01 1.203e+02 1.033e+03 1.148e-01 1.485e-01 1.772e-01
1.060e-01 2.092e-01 6.310e-02 8.337e-01 1.593e+00 4.877e+00 9.881e+01
3.899e-03 2.961e-02 2.817e-02 9.222e-03 2.674e-02 5.126e-03 2.060e+01
2.413e+01 1.351e+02 1.321e+03 1.280e-01 2.297e-01 2.623e-01 1.325e-01
3.021e-01 7.987e-02]

Actual: malignant

Predicted: benign

Data: [9.042e+00 1.890e+01 6.007e+01 2.445e+02 9.968e-02 1.972e-01 1.975e-01
4.908e-02 2.330e-01 8.743e-02 4.653e-01 1.911e+00 3.769e+00 2.420e+01
9.845e-03 6.590e-02 1.027e-01 2.527e-02 3.491e-02 7.877e-03 1.006e+01
2.340e+01 6.862e+01 2.971e+02 1.221e-01 3.748e-01 4.609e-01 1.145e-01
3.135e-01 1.055e-01]

Actual: benign

Predicted: benign

Data: [1.480e+01 1.766e+01 9.588e+01 6.748e+02 9.179e-02 8.890e-02 4.069e-02
2.260e-02 1.893e-01 5.886e-02 2.204e-01 6.221e-01 1.482e+00 1.975e+01
4.796e-03 1.171e-02 1.758e-02 6.897e-03 2.254e-02 1.971e-03 1.643e+01
2.274e+01 1.059e+02 8.295e+02 1.226e-01 1.881e-01 2.060e-01 8.308e-02
3.600e-01 7.285e-02]

Actual: benign

Predicted: benign

Data: [1.230e+01 1.902e+01 7.788e+01 4.644e+02 8.313e-02 4.202e-02 7.756e-03
8.535e-03 1.539e-01 5.945e-02 1.840e-01 1.532e+00 1.199e+00 1.324e+01
7.881e-03 8.432e-03 7.004e-03 6.522e-03 1.939e-02 2.222e-03 1.335e+01
2.846e+01 8.453e+01 5.443e+02 1.222e-01 9.052e-02 3.619e-02 3.983e-02
2.554e-01 7.207e-02]

Actual: benign

Predicted: benign

Data: [1.174e+01 1.469e+01 7.631e+01 4.260e+02 8.099e-02 9.661e-02 6.726e-02
2.639e-02 1.499e-01 6.758e-02 1.924e-01 6.417e-01 1.345e+00 1.304e+01
6.982e-03 3.916e-02 4.017e-02 1.528e-02 2.260e-02 6.822e-03 1.245e+01
1.760e+01 8.125e+01 4.738e+02 1.073e-01 2.793e-01 2.690e-01 1.056e-01
2.604e-01 9.879e-02]

Actual: benign

Predicted: benign

Data: [1.390e+01 1.662e+01 8.897e+01 5.994e+02 6.828e-02 5.319e-02 2.224e-02
1.339e-02 1.813e-01 5.536e-02 1.555e-01 5.762e-01 1.392e+00 1.403e+01
3.308e-03 1.315e-02 9.904e-03 4.832e-03 1.316e-02 2.095e-03 1.514e+01
2.180e+01 1.012e+02 7.189e+02 9.384e-02 2.006e-01 1.384e-01 6.222e-02
2.679e-01 7.698e-02]

Actual: benign

Predicted: malignant

Data: [1.861e+01 2.025e+01 1.221e+02 1.094e+03 9.440e-02 1.066e-01 1.490e-01
7.731e-02 1.697e-01 5.699e-02 8.529e-01 1.849e+00 5.632e+00 9.354e+01
1.075e-02 2.722e-02 5.081e-02 1.911e-02 2.293e-02 4.217e-03 2.131e+01
2.726e+01 1.399e+02 1.403e+03 1.338e-01 2.117e-01 3.446e-01 1.490e-01
2.341e-01 7.421e-02]

Actual: malignant

Predicted: malignant

Data: [1.757e+01 1.505e+01 1.150e+02 9.551e+02 9.847e-02 1.157e-01 9.875e-02
7.953e-02 1.739e-01 6.149e-02 6.003e-01 8.225e-01 4.655e+00 6.110e+01
5.627e-03 3.033e-02 3.407e-02 1.354e-02 1.925e-02 3.742e-03 2.001e+01
1.952e+01 1.349e+02 1.227e+03 1.255e-01 2.812e-01 2.489e-01 1.456e-01
2.756e-01 7.919e-02]

Actual: malignant

Predicted: malignant

Data: [2.051e+01 2.781e+01 1.344e+02 1.319e+03 9.159e-02 1.074e-01 1.554e-01
8.340e-02 1.448e-01 5.592e-02 5.240e-01 1.189e+00 3.767e+00 7.001e+01
5.020e-03 2.062e-02 3.457e-02 1.091e-02 1.298e-02 2.887e-03 2.447e+01
3.738e+01 1.627e+02 1.872e+03 1.223e-01 2.761e-01 4.146e-01 1.563e-01
2.437e-01 8.328e-02]

Actual: malignant

Predicted: benign

Data: [9.465e+00 2.101e+01 6.011e+01 2.694e+02 1.044e-01 7.773e-02 2.172e-02
1.504e-02 1.717e-01 6.899e-02 2.351e-01 2.011e+00 1.660e+00 1.420e+01
1.052e-02 1.755e-02 1.714e-02 9.333e-03 2.279e-02 4.237e-03 1.041e+01
3.156e+01 6.703e+01 3.307e+02 1.548e-01 1.664e-01 9.412e-02 6.517e-02
2.878e-01 9.211e-02]

Actual: benign

Predicted: benign

Data: [1.195e+01 1.496e+01 7.723e+01 4.267e+02 1.158e-01 1.206e-01 1.171e-02
1.787e-02 2.459e-01 6.581e-02 3.610e-01 1.050e+00 2.455e+00 2.665e+01
5.800e-03 2.417e-02 7.816e-03 1.052e-02 2.734e-02 3.114e-03 1.281e+01
1.772e+01 8.309e+01 4.962e+02 1.293e-01 1.885e-01 3.122e-02 4.766e-02
3.124e-01 7.590e-02]

Actual: benign

Predicted: benign

Data: [1.267e+01 1.730e+01 8.125e+01 4.899e+02 1.028e-01 7.664e-02 3.193e-02
2.107e-02 1.707e-01 5.984e-02 2.100e-01 9.505e-01 1.566e+00 1.761e+01
6.809e-03 9.514e-03 1.329e-02 6.474e-03 2.057e-02 1.784e-03 1.371e+01
2.110e+01 8.870e+01 5.744e+02 1.384e-01 1.212e-01 1.020e-01 5.602e-02
2.688e-01 6.888e-02]

Actual: benign

Predicted: benign

Data: [6.981e+00 1.343e+01 4.379e+01 1.435e+02 1.170e-01 7.568e-02 0.000e+00
0.000e+00 1.930e-01 7.818e-02 2.241e-01 1.508e+00 1.553e+00 9.833e+00
1.019e-02 1.084e-02 0.000e+00 0.000e+00 2.659e-02 4.100e-03 7.930e+00
1.954e+01 5.041e+01 1.852e+02 1.584e-01 1.202e-01 0.000e+00 0.000e+00
2.932e-01 9.382e-02]

Actual: benign

Predicted: benign

Data: [1.272e+01 1.378e+01 8.178e+01 4.921e+02 9.667e-02 8.393e-02 1.288e-02
1.924e-02 1.638e-01 6.100e-02 1.807e-01 6.931e-01 1.340e+00 1.338e+01
6.064e-03 1.180e-02 6.564e-03 7.978e-03 1.374e-02 1.392e-03 1.350e+01
1.748e+01 8.854e+01 5.537e+02 1.298e-01 1.472e-01 5.233e-02 6.343e-02
2.369e-01 6.922e-02]

Actual: benign

Predicted: benign

Data: [1.169e+01 2.444e+01 7.637e+01 4.064e+02 1.236e-01 1.552e-01 4.515e-02
4.531e-02 2.131e-01 7.405e-02 2.957e-01 1.978e+00 2.158e+00 2.095e+01
1.288e-02 3.495e-02 1.865e-02 1.766e-02 1.560e-02 5.824e-03 1.298e+01
3.219e+01 8.612e+01 4.877e+02 1.768e-01 3.251e-01 1.395e-01 1.308e-01
2.803e-01 9.970e-02]

Actual: benign

Predicted: malignant

Data: [2.811e+01 1.847e+01 1.885e+02 2.499e+03 1.142e-01 1.516e-01 3.201e-01
1.595e-01 1.648e-01 5.525e-02 2.873e+00 1.476e+00 2.198e+01 5.256e+02
1.345e-02 2.772e-02 6.389e-02 1.407e-02 4.783e-02 4.476e-03 2.811e+01
1.847e+01 1.885e+02 2.499e+03 1.142e-01 1.516e-01 3.201e-01 1.595e-01
1.648e-01 5.525e-02]

Actual: malignant

Predicted: benign

Data: [1.492e+01 1.493e+01 9.645e+01 6.869e+02 8.098e-02 8.549e-02 5.539e-02
3.221e-02 1.687e-01 5.669e-02 2.446e-01 4.334e-01 1.826e+00 2.331e+01
3.271e-03 1.770e-02 2.310e-02 8.399e-03 1.148e-02 2.379e-03 1.718e+01
1.822e+01 1.120e+02 9.066e+02 1.065e-01 2.791e-01 3.151e-01 1.147e-01
2.688e-01 8.273e-02]

Actual: benign

Predicted: malignant

Data: [1.646e+01 2.011e+01 1.093e+02 8.329e+02 9.831e-02 1.556e-01 1.793e-01
8.866e-02 1.794e-01 6.323e-02 3.037e-01 1.284e+00 2.482e+00 3.159e+01
6.627e-03 4.094e-02 5.371e-02 1.813e-02 1.682e-02 4.584e-03 1.779e+01
2.845e+01 1.235e+02 9.812e+02 1.415e-01 4.667e-01 5.862e-01 2.035e-01
3.054e-01 9.519e-02]

Actual: malignant

Predicted: benign

Data: [1.464e+01 1.524e+01 9.577e+01 6.519e+02 1.132e-01 1.339e-01 9.966e-02
7.064e-02 2.116e-01 6.346e-02 5.115e-01 7.372e-01 3.814e+00 4.276e+01
5.508e-03 4.412e-02 4.436e-02 1.623e-02 2.427e-02 4.841e-03 1.634e+01
1.824e+01 1.094e+02 8.036e+02 1.277e-01 3.089e-01 2.604e-01 1.397e-01
3.151e-01 8.473e-02]

Actual: benign

Predicted: malignant

Data: [1.760e+01 2.333e+01 1.190e+02 9.805e+02 9.289e-02 2.004e-01 2.136e-01
1.002e-01 1.696e-01 7.369e-02 9.289e-01 1.465e+00 5.801e+00 1.049e+02
6.766e-03 7.025e-02 6.591e-02 2.311e-02 1.673e-02 1.130e-02 2.157e+01
2.887e+01 1.436e+02 1.437e+03 1.207e-01 4.785e-01 5.165e-01 1.996e-01
2.301e-01 1.224e-01]

Actual: malignant

Predicted: benign

Data: [9.720e+00 1.822e+01 6.073e+01 2.881e+02 6.950e-02 2.344e-02 0.000e+00
0.000e+00 1.653e-01 6.447e-02 3.539e-01 4.885e+00 2.230e+00 2.169e+01
1.713e-03 6.736e-03 0.000e+00 0.000e+00 3.799e-02 1.688e-03 9.968e+00
2.083e+01 6.225e+01 3.038e+02 7.117e-02 2.729e-02 0.000e+00 0.000e+00
1.909e-01 6.559e-02]

Actual: benign

Predicted: benign

Data: [1.359e+01 2.184e+01 8.716e+01 5.610e+02 7.956e-02 8.259e-02 4.072e-02
2.142e-02 1.635e-01 5.859e-02 3.380e-01 1.916e+00 2.591e+00 2.676e+01
5.436e-03 2.406e-02 3.099e-02 9.919e-03 2.030e-02 3.009e-03 1.480e+01
3.004e+01 9.766e+01 6.615e+02 1.005e-01 1.730e-01 1.453e-01 6.189e-02
2.446e-01 7.024e-02]

Actual: benign

Predicted: benign

Data: [1.881e+01 1.998e+01 1.209e+02 1.102e+03 8.923e-02 5.884e-02 8.020e-02
5.843e-02 1.550e-01 4.996e-02 3.283e-01 8.280e-01 2.363e+00 3.674e+01
7.571e-03 1.114e-02 2.623e-02 1.463e-02 1.930e-02 1.676e-03 1.996e+01
2.430e+01 1.290e+02 1.236e+03 1.243e-01 1.160e-01 2.210e-01 1.294e-01
2.567e-01 5.737e-02]

Actual: malignant

Predicted: malignant

Data: [2.016e+01 1.966e+01 1.311e+02 1.274e+03 8.020e-02 8.564e-02 1.155e-01
7.726e-02 1.928e-01 5.096e-02 5.925e-01 6.863e-01 3.868e+00 7.485e+01
4.536e-03 1.376e-02 2.645e-02 1.247e-02 2.193e-02 1.589e-03 2.306e+01
2.303e+01 1.502e+02 1.657e+03 1.054e-01 1.537e-01 2.606e-01 1.425e-01
3.055e-01 5.933e-02]

Actual: malignant

Predicted: benign

Data: [1.404e+01 1.598e+01 8.978e+01 6.112e+02 8.458e-02 5.895e-02 3.534e-02
2.944e-02 1.714e-01 5.898e-02 3.892e-01 1.046e+00 2.644e+00 3.274e+01
7.976e-03 1.295e-02 1.608e-02 9.046e-03 2.005e-02 2.830e-03 1.566e+01
2.158e+01 1.012e+02 7.500e+02 1.195e-01 1.252e-01 1.117e-01 7.453e-02
2.725e-01 7.234e-02]

Actual: benign

Predicted: malignant

Data: [1.386e+01 1.693e+01 9.096e+01 5.789e+02 1.026e-01 1.517e-01 9.901e-02
5.602e-02 2.106e-01 6.916e-02 2.563e-01 1.194e+00 1.933e+00 2.269e+01
5.960e-03 3.438e-02 3.909e-02 1.435e-02 1.939e-02 4.560e-03 1.575e+01
2.693e+01 1.044e+02 7.501e+02 1.460e-01 4.370e-01 4.636e-01 1.654e-01
3.630e-01 1.059e-01]

Actual: malignant

Predicted: benign

Data: [1.405e+01 2.715e+01 9.138e+01 6.004e+02 9.929e-02 1.126e-01 4.462e-02
4.304e-02 1.537e-01 6.171e-02 3.645e-01 1.492e+00 2.888e+00 2.984e+01
7.256e-03 2.678e-02 2.071e-02 1.626e-02 2.080e-02 5.304e-03 1.530e+01
3.317e+01 1.002e+02 7.067e+02 1.241e-01 2.264e-01 1.326e-01 1.048e-01
2.250e-01 8.321e-02]

Actual: benign

Predicted: benign

Data: [1.321e+01 2.525e+01 8.410e+01 5.379e+02 8.791e-02 5.205e-02 2.772e-02
2.068e-02 1.619e-01 5.584e-02 2.084e-01 1.350e+00 1.314e+00 1.758e+01
5.768e-03 8.082e-03 1.510e-02 6.451e-03 1.347e-02 1.828e-03 1.435e+01
3.423e+01 9.129e+01 6.329e+02 1.289e-01 1.063e-01 1.390e-01 6.005e-02
2.444e-01 6.788e-02]

Actual: benign

Predicted: malignant

Data: [1.505e+01 1.907e+01 9.726e+01 7.019e+02 9.215e-02 8.597e-02 7.486e-02
4.335e-02 1.561e-01 5.915e-02 3.860e-01 1.198e+00 2.630e+00 3.849e+01
4.952e-03 1.630e-02 2.967e-02 9.423e-03 1.152e-02 1.718e-03 1.758e+01
2.806e+01 1.138e+02 9.670e+02 1.246e-01 2.101e-01 2.866e-01 1.120e-01
2.282e-01 6.954e-02]

Actual: malignant

Predicted: benign

Data: [1.305e+01 1.384e+01 8.271e+01 5.306e+02 8.352e-02 3.735e-02 4.559e-03
8.829e-03 1.453e-01 5.518e-02 3.975e-01 8.285e-01 2.567e+00 3.301e+01
4.148e-03 4.711e-03 2.831e-03 4.821e-03 1.422e-02 2.273e-03 1.473e+01
1.740e+01 9.396e+01 6.724e+02 1.016e-01 5.847e-02 1.824e-02 3.532e-02
2.107e-01 6.580e-02]

Actual: benign

Predicted: benign

Data: [1.168e+01 1.617e+01 7.549e+01 4.205e+02 1.128e-01 9.263e-02 4.279e-02
3.132e-02 1.853e-01 6.401e-02 3.713e-01 1.154e+00 2.554e+00 2.757e+01
8.998e-03 1.292e-02 1.851e-02 1.167e-02 2.152e-02 3.213e-03 1.332e+01
2.159e+01 8.657e+01 5.498e+02 1.526e-01 1.477e-01 1.490e-01 9.815e-02
2.804e-01 8.024e-02]

Actual: benign

Predicted: malignant

Data: [1.338e+01 3.072e+01 8.634e+01 5.572e+02 9.245e-02 7.426e-02 2.819e-02
3.264e-02 1.375e-01 6.016e-02 3.408e-01 1.924e+00 2.287e+00 2.893e+01
5.841e-03 1.246e-02 7.936e-03 9.128e-03 1.564e-02 2.985e-03 1.505e+01
4.161e+01 9.669e+01 7.056e+02 1.172e-01 1.421e-01 7.003e-02 7.763e-02
2.196e-01 7.675e-02]

Actual: benign

Predicted: malignant

Data: [1.471e+01 2.159e+01 9.555e+01 6.569e+02 1.137e-01 1.365e-01 1.293e-01
8.123e-02 2.027e-01 6.758e-02 4.226e-01 1.150e+00 2.735e+00 4.009e+01
3.659e-03 2.855e-02 2.572e-02 1.272e-02 1.817e-02 4.108e-03 1.787e+01
3.070e+01 1.157e+02 9.855e+02 1.368e-01 4.290e-01 3.587e-01 1.834e-01
3.698e-01 1.094e-01]

Actual: malignant

Predicted: malignant

Data: [2.321e+01 2.697e+01 1.535e+02 1.670e+03 9.509e-02 1.682e-01 1.950e-01
1.237e-01 1.909e-01 6.309e-02 1.058e+00 9.635e-01 7.247e+00 1.558e+02
6.428e-03 2.863e-02 4.497e-02 1.716e-02 1.590e-02 3.053e-03 3.101e+01
3.451e+01 2.060e+02 2.944e+03 1.481e-01 4.126e-01 5.820e-01 2.593e-01
3.103e-01 8.677e-02]

Actual: malignant

Predicted: benign

Data: [1.113e+01 1.662e+01 7.047e+01 3.811e+02 8.151e-02 3.834e-02 1.369e-02
1.370e-02 1.511e-01 6.148e-02 1.415e-01 9.671e-01 9.680e-01 9.704e+00
5.883e-03 6.263e-03 9.398e-03 6.189e-03 2.009e-02 2.377e-03 1.168e+01
2.029e+01 7.435e+01 4.211e+02 1.030e-01 6.219e-02 4.580e-02 4.044e-02
2.383e-01 7.083e-02]

Actual: benign

Predicted: benign

Data: [1.289e+01 1.312e+01 8.189e+01 5.159e+02 6.955e-02 3.729e-02 2.260e-02
1.171e-02 1.337e-01 5.581e-02 1.532e-01 4.690e-01 1.115e+00 1.268e+01
4.731e-03 1.345e-02 1.652e-02 5.905e-03 1.619e-02 2.081e-03 1.362e+01
1.554e+01 8.740e+01 5.770e+02 9.616e-02 1.147e-01 1.186e-01 5.366e-02
2.309e-01 6.915e-02]

Actual: benign

Predicted: benign

Data: [1.143e+01 1.539e+01 7.306e+01 3.998e+02 9.639e-02 6.889e-02 3.503e-02
2.875e-02 1.734e-01 5.865e-02 1.759e-01 9.938e-01 1.143e+00 1.267e+01
5.133e-03 1.521e-02 1.434e-02 8.602e-03 1.501e-02 1.588e-03 1.232e+01
2.202e+01 7.993e+01 4.620e+02 1.190e-01 1.648e-01 1.399e-01 8.476e-02
2.676e-01 6.765e-02]

Actual: benign

Predicted: benign

Data: [1.486e+01 1.694e+01 9.489e+01 6.737e+02 8.924e-02 7.074e-02 3.346e-02
2.877e-02 1.573e-01 5.703e-02 3.028e-01 6.683e-01 1.612e+00 2.392e+01
5.756e-03 1.665e-02 1.461e-02 8.281e-03 1.551e-02 2.168e-03 1.631e+01
2.054e+01 1.023e+02 7.775e+02 1.218e-01 1.550e-01 1.220e-01 7.971e-02
2.525e-01 6.827e-02]

Actual: benign

Predicted: benign

Data: [1.207e+01 1.344e+01 7.783e+01 4.452e+02 1.100e-01 9.009e-02 3.781e-02
2.798e-02 1.657e-01 6.608e-02 2.513e-01 5.040e-01 1.714e+00 1.854e+01
7.327e-03 1.153e-02 1.798e-02 7.986e-03 1.962e-02 2.234e-03 1.345e+01
1.577e+01 8.692e+01 5.499e+02 1.521e-01 1.632e-01 1.622e-01 7.393e-02
2.781e-01 8.052e-02]

Actual: benign

Predicted: benign

Data: [8.950e+00 1.576e+01 5.874e+01 2.452e+02 9.462e-02 1.243e-01 9.263e-02
2.308e-02 1.305e-01 7.163e-02 3.132e-01 9.789e-01 3.280e+00 1.694e+01
1.835e-02 6.760e-02 9.263e-02 2.308e-02 2.384e-02 5.601e-03 9.414e+00
1.707e+01 6.334e+01 2.700e+02 1.179e-01 1.879e-01 1.544e-01 3.846e-02
1.652e-01 7.722e-02]

Actual: benign

Predicted: benign

Data: [1.200e+01 2.823e+01 7.677e+01 4.425e+02 8.437e-02 6.450e-02 4.055e-02
1.945e-02 1.615e-01 6.104e-02 1.912e-01 1.705e+00 1.516e+00 1.386e+01
7.334e-03 2.589e-02 2.941e-02 9.166e-03 1.745e-02 4.302e-03 1.309e+01
3.788e+01 8.507e+01 5.237e+02 1.208e-01 1.856e-01 1.811e-01 7.116e-02
2.447e-01 8.194e-02]

Actual: benign

Predicted: malignant

Data: [1.979e+01 2.512e+01 1.304e+02 1.192e+03 1.015e-01 1.589e-01 2.545e-01
1.149e-01 2.202e-01 6.113e-02 4.953e-01 1.199e+00 2.765e+00 6.333e+01
5.033e-03 3.179e-02 4.755e-02 1.043e-02 1.578e-02 3.224e-03 2.263e+01
3.358e+01 1.487e+02 1.589e+03 1.275e-01 3.861e-01 5.673e-01 1.732e-01
3.305e-01 8.465e-02]

Actual: malignant

Predicted: malignant

Data: [1.825e+01 1.998e+01 1.196e+02 1.040e+03 9.463e-02 1.090e-01 1.127e-01
7.400e-02 1.794e-01 5.742e-02 4.467e-01 7.732e-01 3.180e+00 5.391e+01
4.314e-03 1.382e-02 2.254e-02 1.039e-02 1.369e-02 2.179e-03 2.288e+01
2.766e+01 1.532e+02 1.606e+03 1.442e-01 2.576e-01 3.784e-01 1.932e-01
3.063e-01 8.368e-02]

Actual: malignant

Predicted: benign

Data: [1.247e+01 1.860e+01 8.109e+01 4.819e+02 9.965e-02 1.058e-01 8.005e-02
3.821e-02 1.925e-01 6.373e-02 3.961e-01 1.044e+00 2.497e+00 3.029e+01
6.953e-03 1.911e-02 2.701e-02 1.037e-02 1.782e-02 3.586e-03 1.497e+01
2.464e+01 9.605e+01 6.779e+02 1.426e-01 2.378e-01 2.671e-01 1.015e-01
3.014e-01 8.750e-02]

Actual: benign

Predicted: malignant

Data: [1.361e+01 2.469e+01 8.776e+01 5.726e+02 9.258e-02 7.862e-02 5.285e-02
3.085e-02 1.761e-01 6.130e-02 2.310e-01 1.005e+00 1.752e+00 1.983e+01
4.088e-03 1.174e-02 1.796e-02 6.880e-03 1.323e-02 1.465e-03 1.689e+01
3.564e+01 1.132e+02 8.487e+02 1.471e-01 2.884e-01 3.796e-01 1.329e-01
3.470e-01 7.900e-02]

Actual: malignant

Predicted: benign

Data: [1.018e+01 1.753e+01 6.512e+01 3.131e+02 1.061e-01 8.502e-02 1.768e-02
1.915e-02 1.910e-01 6.908e-02 2.467e-01 1.217e+00 1.641e+00 1.505e+01
7.899e-03 1.400e-02 8.534e-03 7.624e-03 2.637e-02 3.761e-03 1.117e+01
2.284e+01 7.194e+01 3.756e+02 1.406e-01 1.440e-01 6.572e-02 5.575e-02
3.055e-01 8.797e-02]

Actual: benign

Predicted: benign

Data: [1.236e+01 1.854e+01 7.901e+01 4.667e+02 8.477e-02 6.815e-02 2.643e-02
1.921e-02 1.602e-01 6.066e-02 1.199e-01 8.944e-01 8.484e-01 9.227e+00
3.457e-03 1.047e-02 1.167e-02 5.558e-03 1.251e-02 1.356e-03 1.329e+01
2.749e+01 8.556e+01 5.441e+02 1.184e-01 1.963e-01 1.937e-01 8.442e-02
2.983e-01 7.185e-02]

Actual: benign

Predicted: benign

Data: [1.630e+01 1.570e+01 1.047e+02 8.198e+02 9.427e-02 6.712e-02 5.526e-02
4.563e-02 1.711e-01 5.657e-02 2.067e-01 4.706e-01 1.146e+00 2.067e+01
7.394e-03 1.203e-02 2.470e-02 1.431e-02 1.344e-02 2.569e-03 1.732e+01
1.776e+01 1.098e+02 9.282e+02 1.354e-01 1.361e-01 1.947e-01 1.357e-01
2.300e-01 7.230e-02]

Actual: benign

Predicted: benign

Data: [1.221e+01 1.409e+01 7.878e+01 4.620e+02 8.108e-02 7.823e-02 6.839e-02
2.534e-02 1.646e-01 6.154e-02 2.666e-01 8.309e-01 2.097e+00 1.996e+01
4.405e-03 3.026e-02 4.344e-02 1.087e-02 1.921e-02 4.622e-03 1.313e+01
1.929e+01 8.765e+01 5.299e+02 1.026e-01 2.431e-01 3.076e-01 9.140e-02
2.677e-01 8.824e-02]

Actual: benign

Predicted: malignant

Data: [1.808e+01 2.184e+01 1.174e+02 1.024e+03 7.371e-02 8.642e-02 1.103e-01
5.778e-02 1.770e-01 5.340e-02 6.362e-01 1.305e+00 4.312e+00 7.636e+01
5.530e-03 5.296e-02 6.110e-02 1.444e-02 2.140e-02 5.036e-03 1.976e+01
2.470e+01 1.291e+02 1.228e+03 8.822e-02 1.963e-01 2.535e-01 9.181e-02
2.369e-01 6.558e-02]

Actual: malignant

Predicted: benign

Data: [1.305e+01 1.931e+01 8.261e+01 5.272e+02 8.060e-02 3.789e-02 6.920e-04
4.167e-03 1.819e-01 5.501e-02 4.040e-01 1.214e+00 2.595e+00 3.296e+01
7.491e-03 8.593e-03 6.920e-04 4.167e-03 2.190e-02 2.990e-03 1.423e+01
2.225e+01 9.024e+01 6.241e+02 1.021e-01 6.191e-02 1.845e-03 1.111e-02
2.439e-01 6.289e-02]

Actual: benign

Predicted: benign

Data: [1.440e+01 2.699e+01 9.225e+01 6.461e+02 6.995e-02 5.223e-02 3.476e-02
1.737e-02 1.707e-01 5.433e-02 2.315e-01 9.112e-01 1.727e+00 2.052e+01
5.356e-03 1.679e-02 1.971e-02 6.370e-03 1.414e-02 1.892e-03 1.540e+01
3.198e+01 1.004e+02 7.346e+02 1.017e-01 1.460e-01 1.472e-01 5.563e-02
2.345e-01 6.464e-02]

Actual: benign

Predicted: benign

Data: [1.122e+01 1.986e+01 7.194e+01 3.873e+02 1.054e-01 6.779e-02 5.006e-03
7.583e-03 1.940e-01 6.028e-02 2.976e-01 1.966e+00 1.959e+00 1.962e+01
1.289e-02 1.104e-02 3.297e-03 4.967e-03 4.243e-02 1.963e-03 1.198e+01
2.578e+01 7.691e+01 4.361e+02 1.424e-01 9.669e-02 1.335e-02 2.022e-02
3.292e-01 6.522e-02]

Actual: benign

Predicted: benign

Data: [1.278e+01 1.649e+01 8.137e+01 5.025e+02 9.831e-02 5.234e-02 3.653e-02
2.864e-02 1.590e-01 5.653e-02 2.368e-01 8.732e-01 1.471e+00 1.833e+01
7.962e-03 5.612e-03 1.585e-02 8.662e-03 2.254e-02 1.906e-03 1.346e+01
1.976e+01 8.567e+01 5.549e+02 1.296e-01 7.061e-02 1.039e-01 5.882e-02
2.383e-01 6.410e-02]

Actual: benign

Predicted: benign

Data: [1.785e+01 1.323e+01 1.146e+02 9.921e+02 7.838e-02 6.217e-02 4.445e-02
4.178e-02 1.220e-01 5.243e-02 4.834e-01 1.046e+00 3.163e+00 5.095e+01
4.369e-03 8.274e-03 1.153e-02 7.437e-03 1.302e-02 1.309e-03 1.982e+01
1.842e+01 1.271e+02 1.210e+03 9.862e-02 9.976e-02 1.048e-01 8.341e-02
1.783e-01 5.871e-02]

Actual: benign

Predicted: benign

Data: [1.240e+01 1.768e+01 8.147e+01 4.678e+02 1.054e-01 1.316e-01 7.741e-02
2.799e-02 1.811e-01 7.102e-02 1.767e-01 1.460e+00 2.204e+00 1.543e+01
1.000e-02 3.295e-02 4.861e-02 1.167e-02 2.187e-02 6.005e-03 1.288e+01
2.291e+01 8.961e+01 5.158e+02 1.450e-01 2.629e-01 2.403e-01 7.370e-02
2.556e-01 9.359e-02]

Actual: benign

Predicted: benign

Data: [1.669e+01 2.020e+01 1.071e+02 8.576e+02 7.497e-02 7.112e-02 3.649e-02
2.307e-02 1.846e-01 5.325e-02 2.473e-01 5.679e-01 1.775e+00 2.295e+01
2.667e-03 1.446e-02 1.423e-02 5.297e-03 1.961e-02 1.700e-03 1.918e+01
2.656e+01 1.273e+02 1.084e+03 1.009e-01 2.920e-01 2.477e-01 8.737e-02
4.677e-01 7.623e-02]

Actual: malignant

Predicted: malignant

Data: [1.377e+01 2.229e+01 9.063e+01 5.889e+02 1.200e-01 1.267e-01 1.385e-01
6.526e-02 1.834e-01 6.877e-02 6.191e-01 2.112e+00 4.906e+00 4.970e+01
1.380e-02 3.348e-02 4.665e-02 2.060e-02 2.689e-02 4.306e-03 1.639e+01
3.401e+01 1.116e+02 8.069e+02 1.737e-01 3.122e-01 3.809e-01 1.673e-01
3.080e-01 9.333e-02]

Actual: malignant

Predicted: malignant
Data: [1.447e+01 2.499e+01 9.581e+01 6.564e+02 8.837e-02 1.230e-01 1.009e-01
3.890e-02 1.872e-01 6.341e-02 2.542e-01 1.079e+00 2.615e+00 2.311e+01
7.138e-03 4.653e-02 3.829e-02 1.162e-02 2.068e-02 6.111e-03 1.622e+01
3.173e+01 1.135e+02 8.089e+02 1.340e-01 4.202e-01 4.040e-01 1.205e-01
3.187e-01 1.023e-01]
Actual: benign

Predicted: malignant
Data: [2.327e+01 2.204e+01 1.521e+02 1.686e+03 8.439e-02 1.145e-01 1.324e-01
9.702e-02 1.801e-01 5.553e-02 6.642e-01 8.561e-01 4.603e+00 9.785e+01
4.910e-03 2.544e-02 2.822e-02 1.623e-02 1.956e-02 3.740e-03 2.801e+01
2.822e+01 1.842e+02 2.403e+03 1.228e-01 3.583e-01 3.948e-01 2.346e-01
3.589e-01 9.187e-02]
Actual: malignant

Predicted: malignant
Data: [1.973e+01 1.982e+01 1.307e+02 1.206e+03 1.062e-01 1.849e-01 2.417e-01
9.740e-02 1.733e-01 6.697e-02 7.661e-01 7.800e-01 4.115e+00 9.281e+01
8.482e-03 5.057e-02 6.800e-02 1.971e-02 1.467e-02 7.259e-03 2.528e+01
2.559e+01 1.598e+02 1.933e+03 1.710e-01 5.955e-01 8.489e-01 2.507e-01
2.749e-01 1.297e-01]
Actual: malignant

Predicted: malignant
Data: [1.546e+01 1.189e+01 1.025e+02 7.369e+02 1.257e-01 1.555e-01 2.032e-01
1.097e-01 1.966e-01 7.069e-02 4.209e-01 6.583e-01 2.805e+00 4.464e+01
5.393e-03 2.321e-02 4.303e-02 1.320e-02 1.792e-02 4.168e-03 1.879e+01
1.704e+01 1.250e+02 1.102e+03 1.531e-01 3.583e-01 5.830e-01 1.827e-01
3.216e-01 1.010e-01]
Actual: malignant

Predicted: benign
Data: [1.317e+01 2.181e+01 8.542e+01 5.315e+02 9.714e-02 1.047e-01 8.259e-02
5.252e-02 1.746e-01 6.177e-02 1.938e-01 6.123e-01 1.334e+00 1.449e+01
3.350e-03 1.384e-02 1.452e-02 6.853e-03 1.113e-02 1.720e-03 1.623e+01
2.989e+01 1.055e+02 7.407e+02 1.503e-01 3.904e-01 3.728e-01 1.607e-01
3.693e-01 9.618e-02]
Actual: malignant

Predicted: benign
Data: [1.167e+01 2.002e+01 7.521e+01 4.162e+02 1.016e-01 9.453e-02 4.200e-02
2.157e-02 1.859e-01 6.461e-02 2.067e-01 8.745e-01 1.393e+00 1.534e+01
5.251e-03 1.727e-02 1.840e-02 5.298e-03 1.449e-02 2.671e-03 1.335e+01
2.881e+01 8.700e+01 5.506e+02 1.550e-01 2.964e-01 2.758e-01 8.120e-02
3.206e-01 8.950e-02]
Actual: benign

Predicted: benign
Data: [9.876e+00 1.727e+01 6.292e+01 2.954e+02 1.089e-01 7.232e-02 1.756e-02
1.952e-02 1.934e-01 6.285e-02 2.137e-01 1.342e+00 1.517e+00 1.233e+01
9.719e-03 1.249e-02 7.975e-03 7.527e-03 2.210e-02 2.472e-03 1.042e+01
2.322e+01 6.708e+01 3.316e+02 1.415e-01 1.247e-01 6.213e-02 5.588e-02
2.989e-01 7.380e-02]
Actual: benign

Predicted: benign

Data: [1.512e+01 1.668e+01 9.878e+01 7.166e+02 8.876e-02 9.588e-02 7.550e-02
4.079e-02 1.594e-01 5.986e-02 2.711e-01 3.621e-01 1.974e+00 2.644e+01
5.472e-03 1.919e-02 2.039e-02 8.260e-03 1.523e-02 2.881e-03 1.777e+01
2.024e+01 1.177e+02 9.895e+02 1.491e-01 3.331e-01 3.327e-01 1.252e-01
3.415e-01 9.740e-02]

Actual: malignant

Predicted: benign

Data: [1.080e+01 2.198e+01 6.879e+01 3.599e+02 8.801e-02 5.743e-02 3.614e-02
1.404e-02 2.016e-01 5.977e-02 3.077e-01 1.621e+00 2.240e+00 2.020e+01
6.543e-03 2.148e-02 2.991e-02 1.045e-02 1.844e-02 2.690e-03 1.276e+01
3.204e+01 8.369e+01 4.895e+02 1.303e-01 1.696e-01 1.927e-01 7.485e-02
2.965e-01 7.662e-02]

Actual: benign

Predicted: benign

Data: [1.184e+01 1.894e+01 7.551e+01 4.280e+02 8.871e-02 6.900e-02 2.669e-02
1.393e-02 1.533e-01 6.057e-02 2.222e-01 8.652e-01 1.444e+00 1.712e+01
5.517e-03 1.727e-02 2.045e-02 6.747e-03 1.616e-02 2.922e-03 1.330e+01
2.499e+01 8.522e+01 5.463e+02 1.280e-01 1.880e-01 1.471e-01 6.913e-02
2.535e-01 7.993e-02]

Actual: benign

Predicted: malignant

Data: [1.245e+01 1.570e+01 8.257e+01 4.771e+02 1.278e-01 1.700e-01 1.578e-01
8.089e-02 2.087e-01 7.613e-02 3.345e-01 8.902e-01 2.217e+00 2.719e+01
7.510e-03 3.345e-02 3.672e-02 1.137e-02 2.165e-02 5.082e-03 1.547e+01
2.375e+01 1.034e+02 7.416e+02 1.791e-01 5.249e-01 5.355e-01 1.741e-01
3.985e-01 1.244e-01]

Actual: malignant

Predicted: benign

Data: [1.071e+01 2.039e+01 6.950e+01 3.449e+02 1.082e-01 1.289e-01 8.448e-02
2.867e-02 1.668e-01 6.862e-02 3.198e-01 1.489e+00 2.230e+00 2.074e+01
8.902e-03 4.785e-02 7.339e-02 1.745e-02 2.728e-02 7.610e-03 1.169e+01
2.521e+01 7.651e+01 4.104e+02 1.335e-01 2.550e-01 2.534e-01 8.600e-02
2.605e-01 8.701e-02]

Actual: benign

Predicted: benign

Data: [1.171e+01 1.667e+01 7.472e+01 4.236e+02 1.051e-01 6.095e-02 3.592e-02
2.600e-02 1.339e-01 5.945e-02 4.489e-01 2.508e+00 3.258e+00 3.437e+01
6.578e-03 1.380e-02 2.662e-02 1.307e-02 1.359e-02 3.707e-03 1.333e+01
2.548e+01 8.616e+01 5.467e+02 1.271e-01 1.028e-01 1.046e-01 6.968e-02
1.712e-01 7.343e-02]

Actual: benign

Predicted: benign

Data: [1.320e+01 1.743e+01 8.413e+01 5.416e+02 7.215e-02 4.524e-02 4.336e-02
1.105e-02 1.487e-01 5.635e-02 1.630e-01 1.601e+00 8.730e-01 1.356e+01
6.261e-03 1.569e-02 3.079e-02 5.383e-03 1.962e-02 2.250e-03 1.394e+01
2.782e+01 8.828e+01 6.020e+02 1.101e-01 1.508e-01 2.298e-01 4.970e-02
2.767e-01 7.198e-02]

Actual: benign

Predicted: benign

Data: [1.163e+01 2.929e+01 7.487e+01 4.151e+02 9.357e-02 8.574e-02 7.160e-02
2.017e-02 1.799e-01 6.166e-02 3.135e-01 2.426e+00 2.150e+00 2.313e+01
9.861e-03 2.418e-02 4.275e-02 9.215e-03 2.475e-02 2.128e-03 1.312e+01
3.881e+01 8.604e+01 5.278e+02 1.406e-01 2.031e-01 2.923e-01 6.835e-02
2.884e-01 7.220e-02]

Actual: benign

Predicted: benign

Data: [1.270e+01 1.217e+01 8.088e+01 4.950e+02 8.785e-02 5.794e-02 2.360e-02
2.402e-02 1.583e-01 6.275e-02 2.253e-01 6.457e-01 1.527e+00 1.737e+01
6.131e-03 1.263e-02 9.075e-03 8.231e-03 1.713e-02 4.414e-03 1.365e+01
1.692e+01 8.812e+01 5.669e+02 1.314e-01 1.607e-01 9.385e-02 8.224e-02
2.775e-01 9.464e-02]

Actual: benign

Predicted: benign

Data: [1.075e+01 1.497e+01 6.826e+01 3.553e+02 7.793e-02 5.139e-02 2.251e-02
7.875e-03 1.399e-01 5.688e-02 2.525e-01 1.239e+00 1.806e+00 1.774e+01
6.547e-03 1.781e-02 2.018e-02 5.612e-03 1.671e-02 2.360e-03 1.195e+01
2.072e+01 7.779e+01 4.412e+02 1.076e-01 1.223e-01 9.755e-02 3.413e-02
2.300e-01 6.769e-02]

Actual: benign

Predicted: benign

Data: [1.350e+01 1.271e+01 8.569e+01 5.662e+02 7.376e-02 3.614e-02 2.758e-03
4.419e-03 1.365e-01 5.335e-02 2.244e-01 6.864e-01 1.509e+00 2.039e+01
3.338e-03 3.746e-03 2.030e-03 3.242e-03 1.480e-02 1.566e-03 1.497e+01
1.694e+01 9.548e+01 6.987e+02 9.023e-02 5.836e-02 1.379e-02 2.210e-02
2.267e-01 6.192e-02]

Actual: benign

Predicted: benign

Data: [1.295e+01 1.602e+01 8.314e+01 5.137e+02 1.005e-01 7.943e-02 6.155e-02
3.370e-02 1.730e-01 6.470e-02 2.094e-01 7.636e-01 1.231e+00 1.767e+01
8.725e-03 2.003e-02 2.335e-02 1.132e-02 2.625e-02 4.726e-03 1.374e+01
1.993e+01 8.881e+01 5.854e+02 1.483e-01 2.068e-01 2.241e-01 1.056e-01
3.380e-01 9.584e-02]

Actual: benign

Predicted: malignant

Data: [1.720e+01 2.452e+01 1.142e+02 9.294e+02 1.071e-01 1.830e-01 1.692e-01
7.944e-02 1.927e-01 6.487e-02 5.907e-01 1.041e+00 3.705e+00 6.947e+01
5.820e-03 5.616e-02 4.252e-02 1.127e-02 1.527e-02 6.299e-03 2.332e+01
3.382e+01 1.516e+02 1.681e+03 1.585e-01 7.394e-01 6.566e-01 1.899e-01
3.313e-01 1.339e-01]

Actual: malignant

Predicted: malignant

Data: [1.344e+01 2.158e+01 8.618e+01 5.630e+02 8.162e-02 6.031e-02 3.110e-02
2.031e-02 1.784e-01 5.587e-02 2.385e-01 8.265e-01 1.572e+00 2.053e+01
3.280e-03 1.102e-02 1.390e-02 6.881e-03 1.380e-02 1.286e-03 1.593e+01
3.025e+01 1.025e+02 7.879e+02 1.094e-01 2.043e-01 2.085e-01 1.112e-01
2.994e-01 7.146e-02]

Actual: malignant

Predicted: benign

Data: [1.049e+01 1.929e+01 6.741e+01 3.361e+02 9.989e-02 8.578e-02 2.995e-02
1.201e-02 2.217e-01 6.481e-02 3.550e-01 1.534e+00 2.302e+00 2.313e+01
7.595e-03 2.219e-02 2.880e-02 8.614e-03 2.710e-02 3.451e-03 1.154e+01
2.331e+01 7.422e+01 4.028e+02 1.219e-01 1.486e-01 7.987e-02 3.203e-02
2.826e-01 7.552e-02]

Actual: benign

Predicted: malignant

Data: [1.311e+01 1.556e+01 8.721e+01 5.302e+02 1.398e-01 1.765e-01 2.071e-01
9.601e-02 1.925e-01 7.692e-02 3.908e-01 9.238e-01 2.410e+00 3.466e+01
7.162e-03 2.912e-02 5.473e-02 1.388e-02 1.547e-02 7.098e-03 1.631e+01
2.240e+01 1.064e+02 8.272e+02 1.862e-01 4.099e-01 6.376e-01 1.986e-01
3.147e-01 1.405e-01]

Actual: malignant

Predicted: benign

Data: [1.625e+01 1.951e+01 1.098e+02 8.158e+02 1.026e-01 1.893e-01 2.236e-01
9.194e-02 2.151e-01 6.578e-02 3.147e-01 9.857e-01 3.070e+00 3.312e+01
9.197e-03 5.470e-02 8.079e-02 2.215e-02 2.773e-02 6.355e-03 1.739e+01
2.305e+01 1.221e+02 9.397e+02 1.377e-01 4.462e-01 5.897e-01 1.775e-01
3.318e-01 9.136e-02]

Actual: malignant

Predicted: benign

Data: [1.254e+01 1.807e+01 7.942e+01 4.919e+02 7.436e-02 2.650e-02 1.194e-03
5.449e-03 1.528e-01 5.185e-02 3.511e-01 9.527e-01 2.329e+00 2.830e+01
5.783e-03 4.693e-03 7.929e-04 3.617e-03 2.043e-02 1.058e-03 1.372e+01
2.098e+01 8.682e+01 5.857e+02 9.293e-02 4.327e-02 3.581e-03 1.635e-02
2.233e-01 5.521e-02]

Actual: benign

Predicted: malignant

Data: [1.550e+01 2.108e+01 1.029e+02 8.031e+02 1.120e-01 1.571e-01 1.522e-01
8.481e-02 2.085e-01 6.864e-02 1.370e+00 1.213e+00 9.424e+00 1.765e+02
8.198e-03 3.889e-02 4.493e-02 2.139e-02 2.018e-02 5.815e-03 2.317e+01
2.765e+01 1.571e+02 1.748e+03 1.517e-01 4.002e-01 4.211e-01 2.134e-01
3.003e-01 1.048e-01]

Actual: malignant

Predicted: benign

Data: [1.187e+01 2.154e+01 7.683e+01 4.320e+02 6.613e-02 1.064e-01 8.777e-02
2.386e-02 1.349e-01 6.612e-02 2.560e-01 1.554e+00 1.955e+00 2.024e+01
6.854e-03 6.063e-02 6.663e-02 1.553e-02 2.354e-02 8.925e-03 1.279e+01
2.818e+01 8.351e+01 5.072e+02 9.457e-02 3.399e-01 3.218e-01 8.750e-02
2.305e-01 9.952e-02]

Actual: benign

Predicted: benign

Data: [1.126e+01 1.983e+01 7.130e+01 3.881e+02 8.511e-02 4.413e-02 5.067e-03
5.664e-03 1.637e-01 6.343e-02 1.344e-01 1.083e+00 9.812e-01 9.332e+00
4.200e-03 5.900e-03 3.846e-03 4.065e-03 1.487e-02 2.295e-03 1.193e+01
2.643e+01 7.638e+01 4.359e+02 1.108e-01 7.723e-02 2.533e-02 2.832e-02
2.557e-01 7.613e-02]

Actual: benign

Predicted: benign

Data: [1.495e+01 1.877e+01 9.784e+01 6.895e+02 8.138e-02 1.167e-01 9.050e-02
3.562e-02 1.744e-01 6.493e-02 4.220e-01 1.909e+00 3.271e+00 3.943e+01
5.790e-03 4.877e-02 5.303e-02 1.527e-02 3.356e-02 9.368e-03 1.625e+01
2.547e+01 1.071e+02 8.097e+02 9.970e-02 2.521e-01 2.500e-01 8.405e-02
2.852e-01 9.218e-02]

Actual: benign

Predicted: malignant

Data: [1.805e+01 1.615e+01 1.202e+02 1.006e+03 1.065e-01 2.146e-01 1.684e-01
1.080e-01 2.152e-01 6.673e-02 9.806e-01 5.505e-01 6.311e+00 1.348e+02
7.940e-03 5.839e-02 4.658e-02 2.070e-02 2.591e-02 7.054e-03 2.239e+01
1.891e+01 1.501e+02 1.610e+03 1.478e-01 5.634e-01 3.786e-01 2.102e-01
3.751e-01 1.108e-01]

Actual: malignant

Predicted: benign

Data: [1.057e+01 2.022e+01 7.015e+01 3.383e+02 9.073e-02 1.660e-01 2.280e-01
5.941e-02 2.188e-01 8.450e-02 1.115e-01 1.231e+00 2.363e+00 7.228e+00
8.499e-03 7.643e-02 1.535e-01 2.919e-02 1.617e-02 1.220e-02 1.085e+01
2.282e+01 7.651e+01 3.519e+02 1.143e-01 3.619e-01 6.030e-01 1.465e-01
2.597e-01 1.200e-01]

Actual: benign

Predicted: benign

Data: [1.194e+01 1.824e+01 7.571e+01 4.376e+02 8.261e-02 4.751e-02 1.972e-02
1.349e-02 1.868e-01 6.110e-02 2.273e-01 6.329e-01 1.520e+00 1.747e+01
7.210e-03 8.380e-03 1.311e-02 8.000e-03 1.996e-02 2.635e-03 1.310e+01
2.133e+01 8.367e+01 5.272e+02 1.144e-01 8.906e-02 9.203e-02 6.296e-02
2.785e-01 7.408e-02]

Actual: benign

Predicted: benign

Data: [1.330e+01 2.157e+01 8.524e+01 5.461e+02 8.582e-02 6.373e-02 3.344e-02
2.424e-02 1.815e-01 5.696e-02 2.621e-01 1.539e+00 2.028e+00 2.098e+01
5.498e-03 2.045e-02 1.795e-02 6.399e-03 1.829e-02 1.956e-03 1.420e+01
2.920e+01 9.294e+01 6.212e+02 1.140e-01 1.667e-01 1.212e-01 5.614e-02
2.637e-01 6.658e-02]

Actual: benign

Predicted: benign

Data: [8.618e+00 1.179e+01 5.434e+01 2.245e+02 9.752e-02 5.272e-02 2.061e-02
7.799e-03 1.683e-01 7.187e-02 1.559e-01 5.796e-01 1.046e+00 8.322e+00
1.011e-02 1.055e-02 1.981e-02 5.742e-03 2.090e-02 2.788e-03 9.507e+00
1.540e+01 5.990e+01 2.749e+02 1.733e-01 1.239e-01 1.168e-01 4.419e-02
3.220e-01 9.026e-02]

Actual: benign

Predicted: malignant

Data: [1.553e+01 3.356e+01 1.037e+02 7.449e+02 1.063e-01 1.639e-01 1.751e-01
8.399e-02 2.091e-01 6.650e-02 2.419e-01 1.278e+00 1.903e+00 2.302e+01
5.345e-03 2.556e-02 2.889e-02 1.022e-02 9.947e-03 3.359e-03 1.849e+01
4.954e+01 1.263e+02 1.035e+03 1.883e-01 5.564e-01 5.703e-01 2.014e-01
3.512e-01 1.204e-01]

Actual: malignant

Predicted: malignant

Data: [2.064e+01 1.735e+01 1.348e+02 1.335e+03 9.446e-02 1.076e-01 1.527e-01
8.941e-02 1.571e-01 5.478e-02 6.137e-01 6.575e-01 4.119e+00 7.702e+01
6.211e-03 1.895e-02 2.681e-02 1.232e-02 1.276e-02 1.711e-03 2.537e+01
2.317e+01 1.668e+02 1.946e+03 1.562e-01 3.055e-01 4.159e-01 2.112e-01
2.689e-01 7.055e-02]

Actual: malignant

Predicted: benign

Data: [1.151e+01 2.393e+01 7.452e+01 4.035e+02 9.261e-02 1.021e-01 1.112e-01
4.105e-02 1.388e-01 6.570e-02 2.388e-01 2.904e+00 1.936e+00 1.697e+01
8.200e-03 2.982e-02 5.738e-02 1.267e-02 1.488e-02 4.738e-03 1.248e+01
3.716e+01 8.228e+01 4.742e+02 1.298e-01 2.517e-01 3.630e-01 9.653e-02
2.112e-01 8.732e-02]

Actual: benign

Predicted: benign

Data: [1.029e+01 2.761e+01 6.567e+01 3.214e+02 9.030e-02 7.658e-02 5.999e-02
2.738e-02 1.593e-01 6.127e-02 2.199e-01 2.239e+00 1.437e+00 1.446e+01
1.205e-02 2.736e-02 4.804e-02 1.721e-02 1.843e-02 4.938e-03 1.084e+01
3.491e+01 6.957e+01 3.576e+02 1.384e-01 1.710e-01 2.000e-01 9.127e-02
2.226e-01 8.283e-02]

Actual: benign

Predicted: benign

Data: [1.370e+01 1.764e+01 8.776e+01 5.711e+02 9.950e-02 7.957e-02 4.548e-02
3.160e-02 1.732e-01 6.088e-02 2.431e-01 9.462e-01 1.564e+00 2.064e+01
3.245e-03 8.186e-03 1.698e-02 9.233e-03 1.285e-02 1.524e-03 1.496e+01
2.353e+01 9.578e+01 6.865e+02 1.199e-01 1.346e-01 1.742e-01 9.077e-02
2.518e-01 6.960e-02]

Actual: benign

Predicted: malignant

Data: [1.845e+01 2.191e+01 1.202e+02 1.075e+03 9.430e-02 9.709e-02 1.153e-01
6.847e-02 1.692e-01 5.727e-02 5.959e-01 1.202e+00 3.766e+00 6.835e+01
6.001e-03 1.422e-02 2.855e-02 9.148e-03 1.492e-02 2.205e-03 2.252e+01
3.139e+01 1.456e+02 1.590e+03 1.465e-01 2.275e-01 3.965e-01 1.379e-01
3.109e-01 7.610e-02]

Actual: malignant

Predicted: malignant

Data: [1.626e+01 2.188e+01 1.075e+02 8.268e+02 1.165e-01 1.283e-01 1.799e-01
7.981e-02 1.869e-01 6.532e-02 5.706e-01 1.457e+00 2.961e+00 5.772e+01
1.056e-02 3.756e-02 5.839e-02 1.186e-02 4.022e-02 6.187e-03 1.773e+01
2.521e+01 1.137e+02 9.752e+02 1.426e-01 2.116e-01 3.344e-01 1.047e-01
2.736e-01 7.953e-02]

Actual: malignant

Predicted: benign

Data: [1.298e+01 1.935e+01 8.452e+01 5.140e+02 9.579e-02 1.125e-01 7.107e-02
2.950e-02 1.761e-01 6.540e-02 2.684e-01 5.664e-01 2.465e+00 2.065e+01
5.727e-03 3.255e-02 4.393e-02 9.811e-03 2.751e-02 4.572e-03 1.442e+01
2.195e+01 9.921e+01 6.343e+02 1.288e-01 3.253e-01 3.439e-01 9.858e-02
3.596e-01 9.166e-02]

Actual: benign

Predicted: benign
Data: [7.691e+00 2.544e+01 4.834e+01 1.704e+02 8.668e-02 1.199e-01 9.252e-02
1.364e-02 2.037e-01 7.751e-02 2.196e-01 1.479e+00 1.445e+00 1.173e+01
1.547e-02 6.457e-02 9.252e-02 1.364e-02 2.105e-02 7.551e-03 8.678e+00
3.189e+01 5.449e+01 2.236e+02 1.596e-01 3.064e-01 3.393e-01 5.000e-02
2.790e-01 1.066e-01]
Actual: benign

Predicted: benign
Data: [1.277e+01 2.141e+01 8.202e+01 5.074e+02 8.749e-02 6.601e-02 3.112e-02
2.864e-02 1.694e-01 6.287e-02 7.311e-01 1.748e+00 5.118e+00 5.365e+01
4.571e-03 1.790e-02 2.176e-02 1.757e-02 3.373e-02 5.875e-03 1.375e+01
2.350e+01 8.904e+01 5.795e+02 9.388e-02 8.978e-02 5.186e-02 4.773e-02
2.179e-01 6.871e-02]
Actual: benign

Predicted: benign
Data: [1.174e+01 1.402e+01 7.424e+01 4.273e+02 7.813e-02 4.340e-02 2.245e-02
2.763e-02 2.101e-01 6.113e-02 5.619e-01 1.268e+00 3.717e+00 3.783e+01
8.034e-03 1.442e-02 1.514e-02 1.846e-02 2.921e-02 2.005e-03 1.331e+01
1.826e+01 8.470e+01 5.337e+02 1.036e-01 8.500e-02 6.735e-02 8.290e-02
3.101e-01 6.688e-02]
Actual: benign

Predicted: benign
Data: [1.385e+01 1.721e+01 8.844e+01 5.887e+02 8.785e-02 6.136e-02 1.420e-02
1.141e-02 1.614e-01 5.890e-02 2.185e-01 8.561e-01 1.495e+00 1.791e+01
4.599e-03 9.169e-03 9.127e-03 4.814e-03 1.247e-02 1.708e-03 1.549e+01
2.358e+01 1.003e+02 7.259e+02 1.157e-01 1.350e-01 8.115e-02 5.104e-02
2.364e-01 7.182e-02]
Actual: benign

Predicted: benign
Data: [1.106e+01 1.496e+01 7.149e+01 3.739e+02 1.033e-01 9.097e-02 5.397e-02
3.341e-02 1.776e-01 6.907e-02 1.601e-01 8.225e-01 1.355e+00 1.080e+01
7.416e-03 1.877e-02 2.758e-02 1.010e-02 2.348e-02 2.917e-03 1.192e+01
1.990e+01 7.976e+01 4.400e+02 1.418e-01 2.210e-01 2.299e-01 1.075e-01
3.301e-01 9.080e-02]
Actual: benign

In []: