Sign Language Recognition - Training Report

Dataset Information

Total Samples	8168
Training Samples	4084
Testing Samples	4084
Number of Features	63
Number of Classes	24

Class Distribution

Class Distribution in Training Set
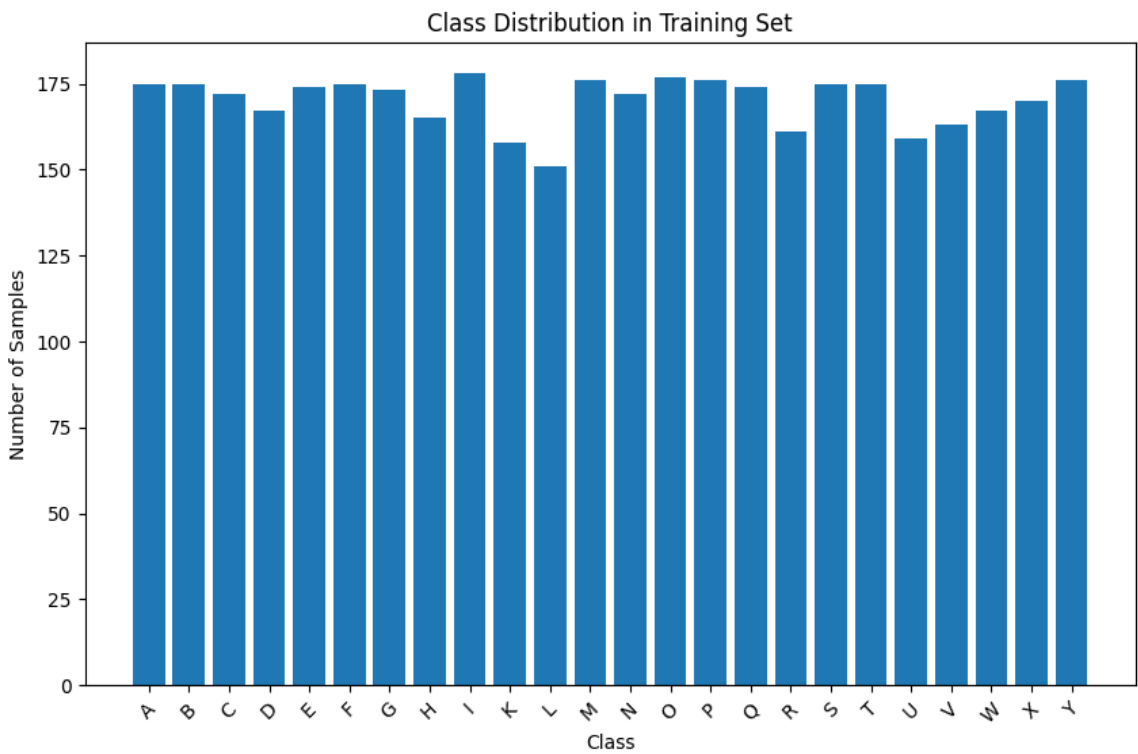
Model Performance Comparison

RandomForest Results:

Metric	Value
Accuracy	0.9699
Macro Precision	0.9703
Macro Recall	0.9693
Macro F1	0.9696
ROC AUC	0.9995
CV Mean	0.8788
CV Std	0.0052

Confusion Matrix:

Confusion Matrix
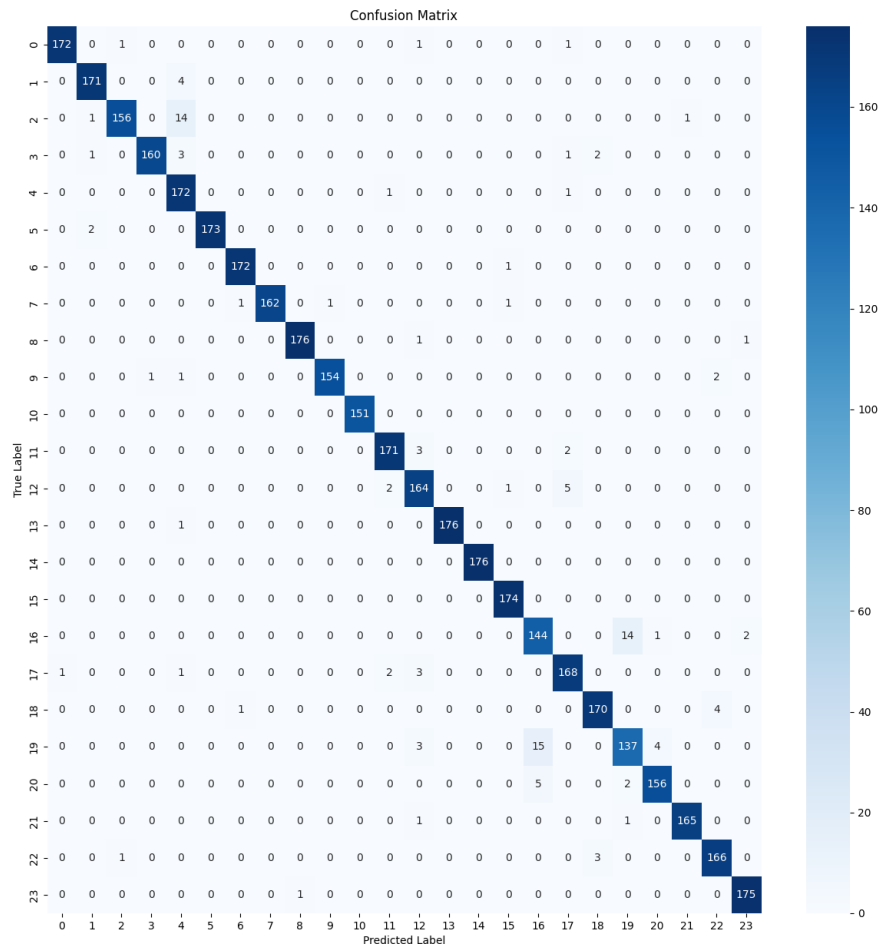
SVM Results:

Metric	Value
Accuracy	0.9177
Macro Precision	0.9170
Macro Recall	0.9162
Macro F1	0.9157
ROC AUC	0.9977
CV Mean	0.8915

CV Std	0.0074

Confusion Matrix:

Confusion Matrix

XGBoost Results:

Metric	Value
Accuracy	0.9988
Macro Precision	0.9988
Macro Recall	0.9987

Macro F1	0.9987
ROC AUC	1.0000
CV Mean	0.9334
CV Std	0.0065

Confusion Matrix:

Confusion Matrix