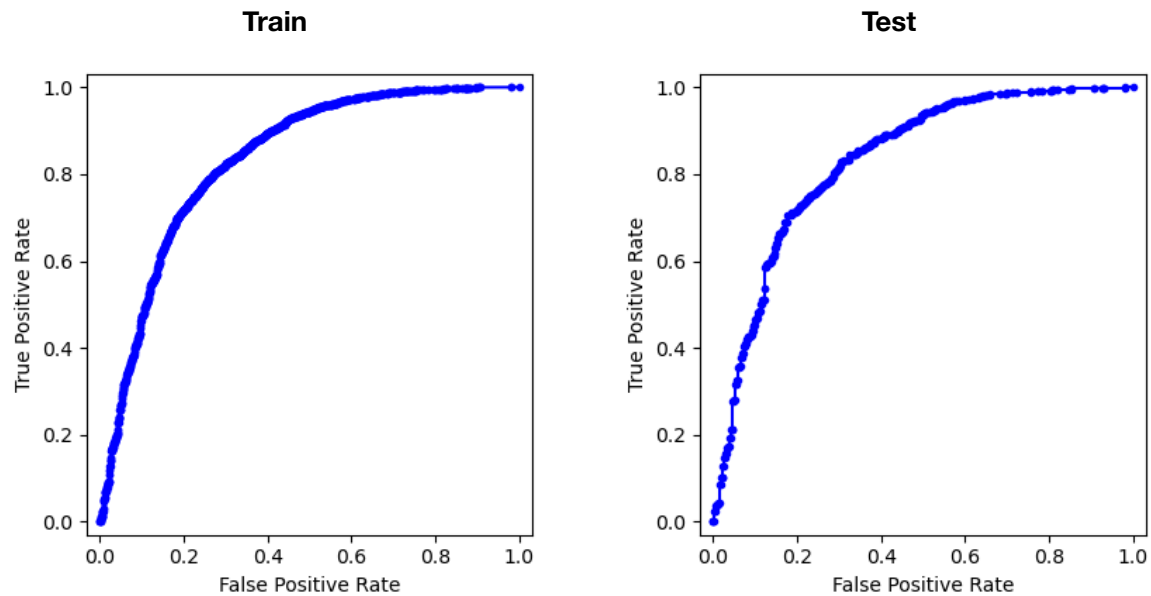## Hyperparameters of best model
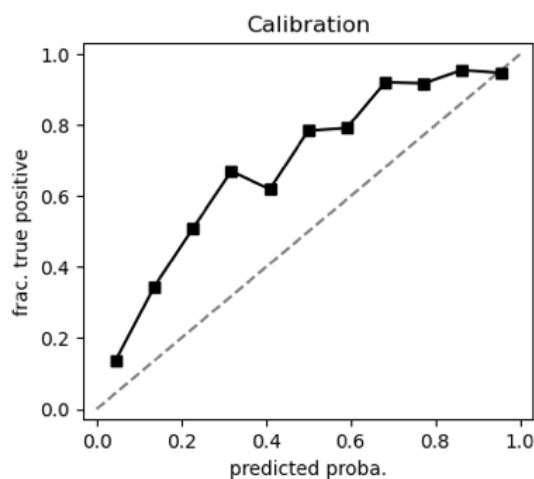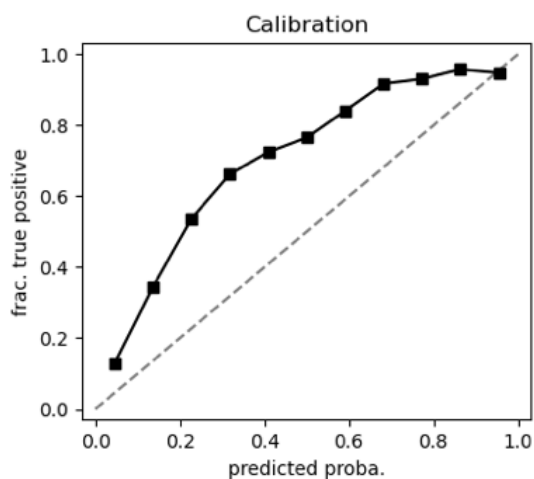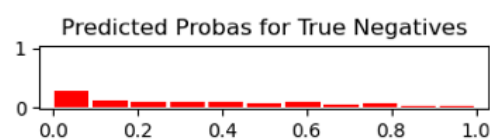
```
ThresholdClassifier(cache={}, classes=array([0, 1]),
                    clf=LogisticRegression(C=100.0, class_weight='balanced',
                                           random_state=8675309),
                    threshold=0.38115196841236915)
```

Input Data Summary

	n_examples	n_labels_positive	frac_labels_positive
split_name			
train	6064	4791	0.7901
test	1515	1177	0.7769

Performance Plots
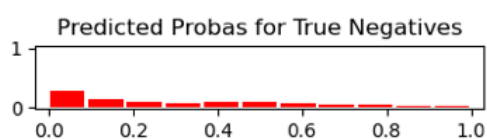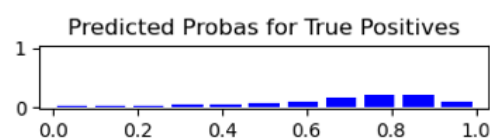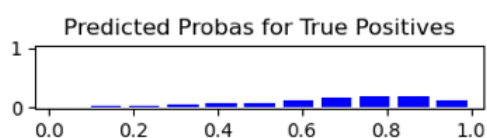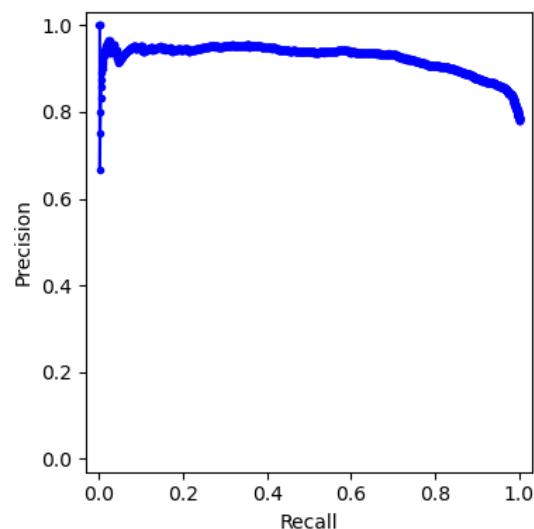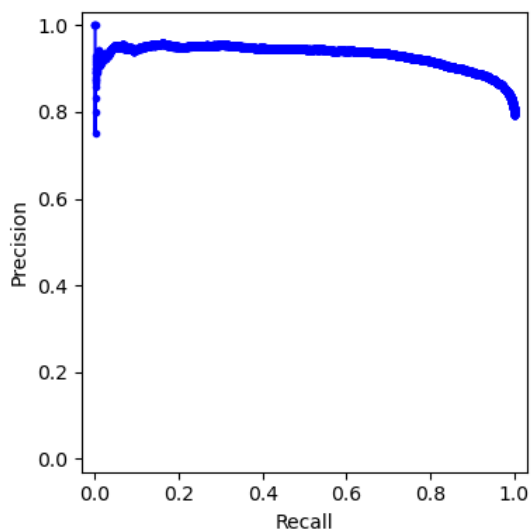
Predicted label	0	1
True label		
0	773	500
1	533	4258

Predicted label	0	1
True label		
0	201	137
1	137	1040

Performance Metrics using Probabilities

	AUROC	AUPRC	average_precision	cross_entropy_base2
split_name				

train	0.8343	0.9318	0.9319	0.6966
test	0.8317	0.9264	0.9266	0.7037

Performance Metrics using Thresholded Decisions

	balanced_accuracy	accuracy	f1_score	TPR	TNR	PPV	NPV
split_name							
train	0.7480	0.8297	0.8918	0.8887	0.6072	0.8949	0.5919
test	0.7391	0.8191	0.8836	0.8836	0.5947	0.8836	0.5947

Settings: Hyperparameters to Tune

```
grid_C: [1e-07, 1e-05, 0.001, 0.01, 0.1, 1.0, 10.0, 100.0, 1000.0]
```

Settings: Protocol

```
key_cols_to_group_when_splitting: ['subject_id']
n_splits: 3
outcome_col_name: horizontal_motion_binary_label
random_seed: 8675309
scoring: roc_auc
splitter_type: group_split
threshold_scoring: balanced_accuracy
validation_size: 0.1
```

Settings: Data

```
data_dict_files: /Users/hezekiah/Documents/GitHub/time_series_prediction/datasets/unimi
b_shar_activities/v20200515/split-by=subject_id/collapsed_features_per_sequence/x_dict.
json,/Users/hezekiah/Documents/GitHub/time_series_prediction/datasets/unimib_shar_activ
ities/v20200515/split-by=subject_id/collapsed_features_per_sequence/y_dict.json
output_dir: /tmp/results/unimib_shar_activities/v20200515/split-by=subject_id/collapsed
_features_per_sequence/logistic_regression
test_csv_files: /Users/hezekiah/Documents/GitHub/time_series_prediction/datasets/unimib
_shar_activities/v20200515/split-by=subject_id/collapsed_features_per_sequence/x_test.c
sv,/Users/hezekiah/Documents/GitHub/time_series_prediction/datasets/unimib_shar_activit
ies/v20200515/split-by=subject_id/collapsed_features_per_sequence/y_test.csv
train_csv_files: /Users/hezekiah/Documents/GitHub/time_series_prediction/datasets/unimi
b_shar_activities/v20200515/split-by=subject_id/collapsed_features_per_sequence/x_train
.csv,/Users/hezekiah/Documents/GitHub/time_series_prediction/datasets/unimib_shar_activ
ities/v20200515/split-by=subject_id/collapsed_features_per_sequence/y_train.csv
```

Hyperparameter Search results

Train Scores across splits

	params	mean_train_score	split0_train_score	split1_train_score	split2_train_score
0	{'C': 1e-07}	0.6249	0.6269	0.6186	0.6294

1	{'C': 1e-05}	0.7304	0.7239	0.7313	0.7360
2	{'C': 0.001}	0.8359	0.8298	0.8422	0.8356
3	{'C': 0.01}	0.8453	0.8419	0.8495	0.8446
4	{'C': 0.1}	0.8482	0.8480	0.8534	0.8431
5	{'C': 1.0}	0.8449	0.8428	0.8477	0.8440
6	{'C': 10.0}	0.8451	0.8451	0.8488	0.8415
7	{'C': 100.0}	0.8455	0.8401	0.8523	0.8442
8	{'C': 1000.0}	0.8458	0.8430	0.8473	0.8472

Heldout Scores across splits

	params	mean_test_score	split0_test_score	split1_test_score	split2_test_score
0	{'C': 1e-07}	0.5169	0.7095	0.2914	0.5499
1	{'C': 1e-05}	0.6453	0.7216	0.5752	0.6390
2	{'C': 0.001}	0.7461	0.8720	0.6567	0.7097
3	{'C': 0.01}	0.7651	0.8749	0.6768	0.7435
4	{'C': 0.1}	0.7714	0.8605	0.7066	0.7471
5	{'C': 1.0}	0.7723	0.8727	0.6859	0.7584
6	{'C': 10.0}	0.7708	0.8656	0.6876	0.7591
7	{'C': 100.0}	0.7726	0.8625	0.6953	0.7600
8	{'C': 1000.0}	0.7699	0.8735	0.6871	0.7491

file:///private/tmp/results/unimib_shar_activities/v20200515/split-by=subject_id/collapsed_features_per_sequence/logistic_regression/report.html

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