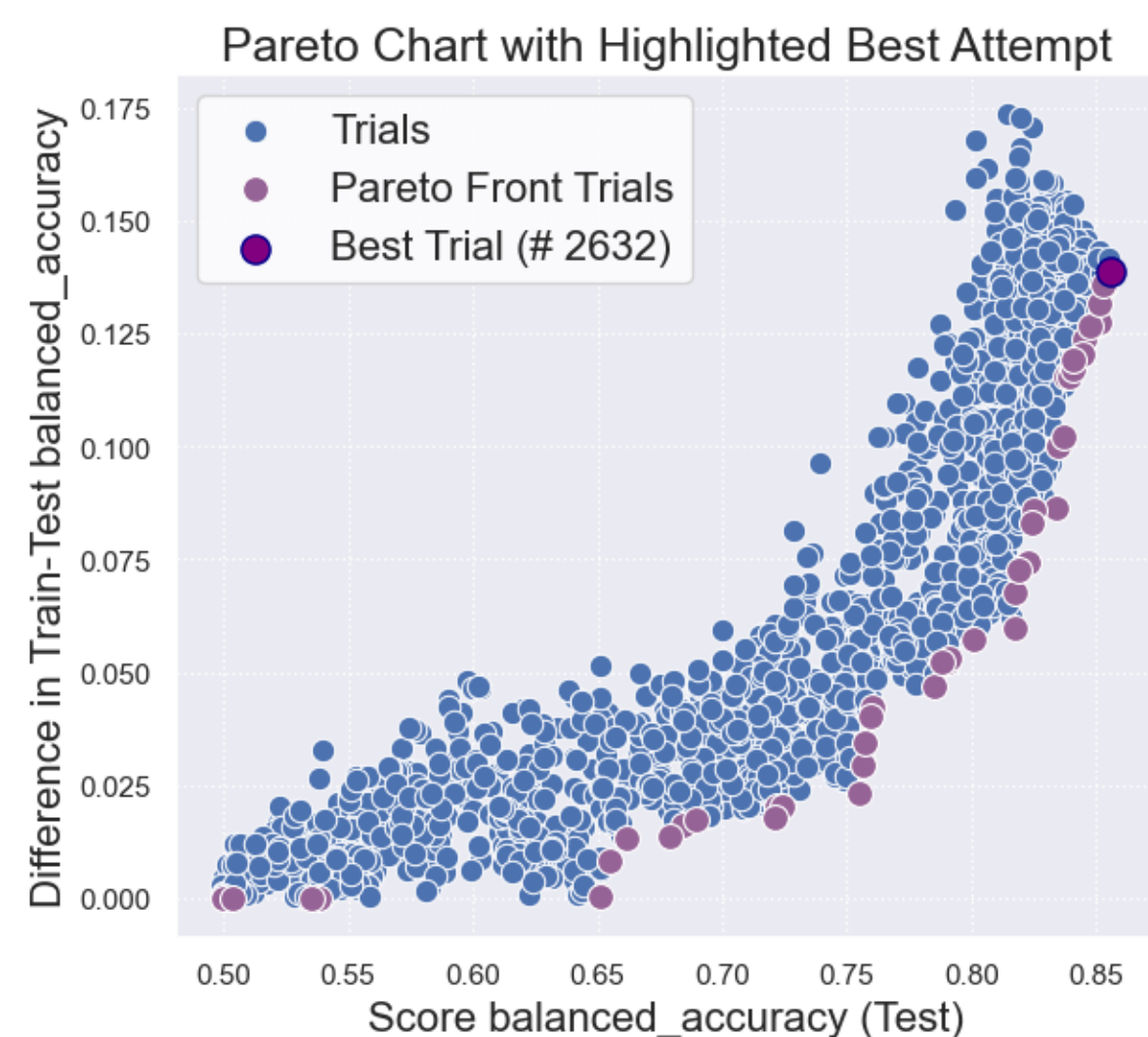
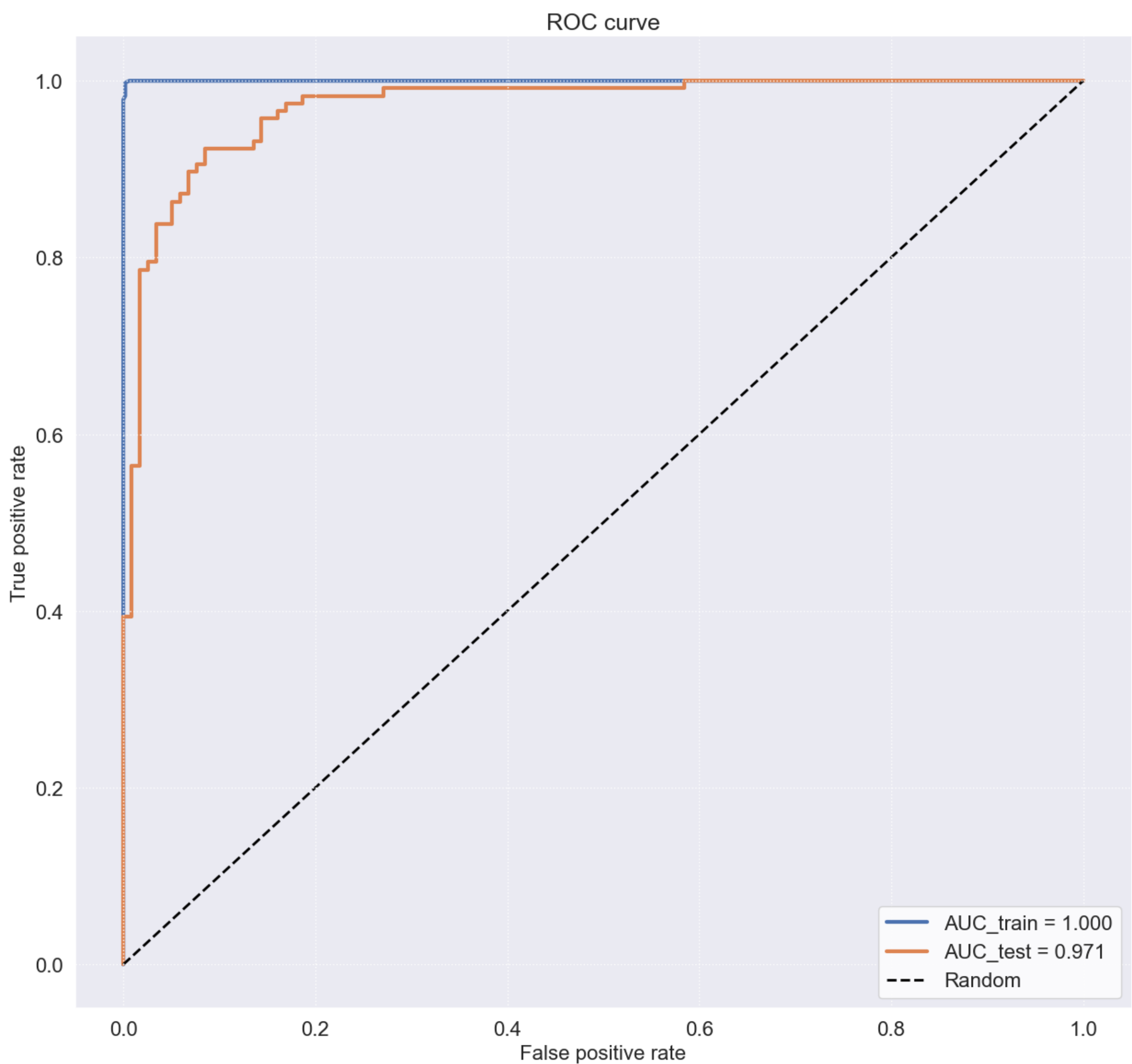
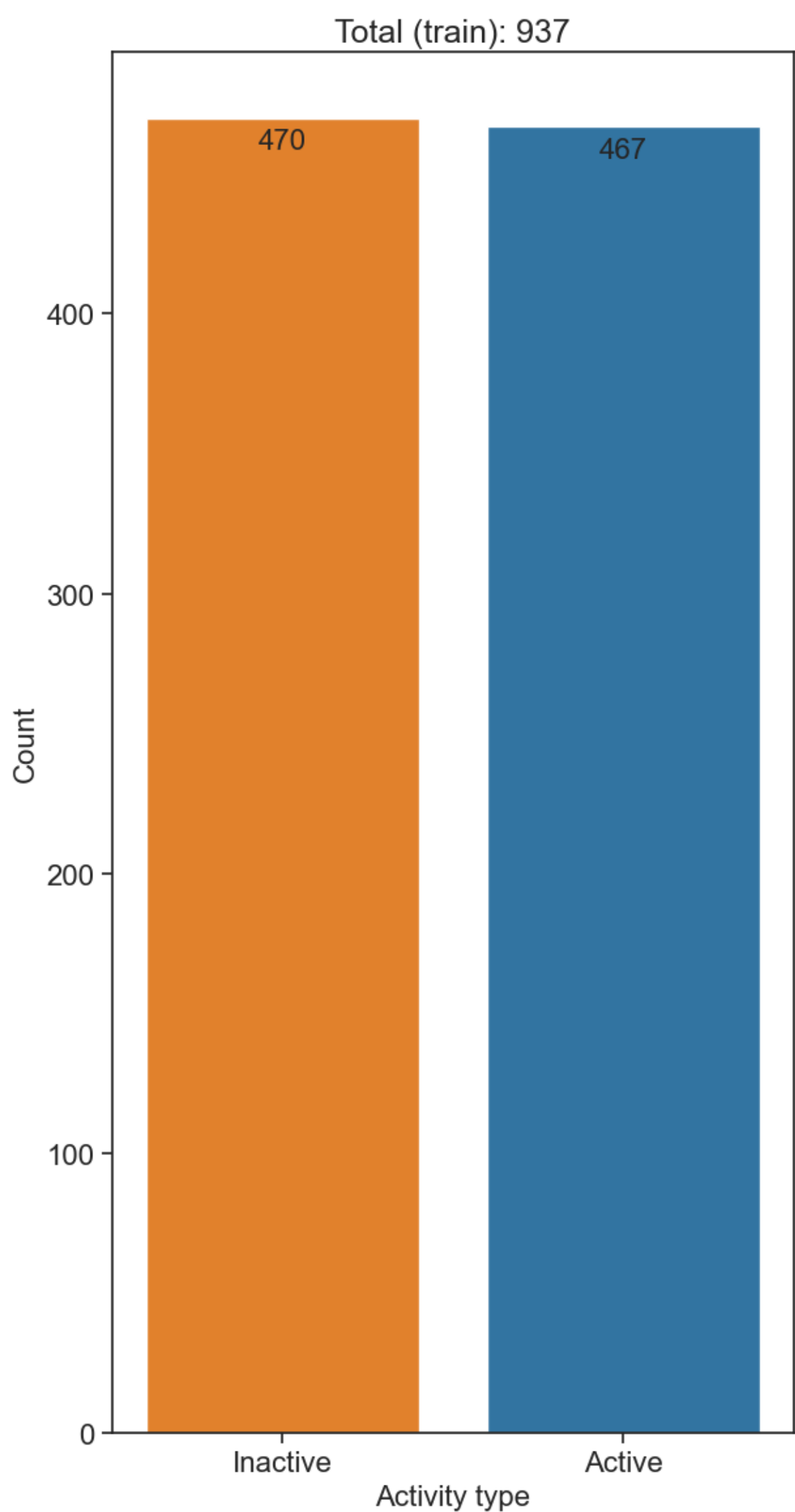
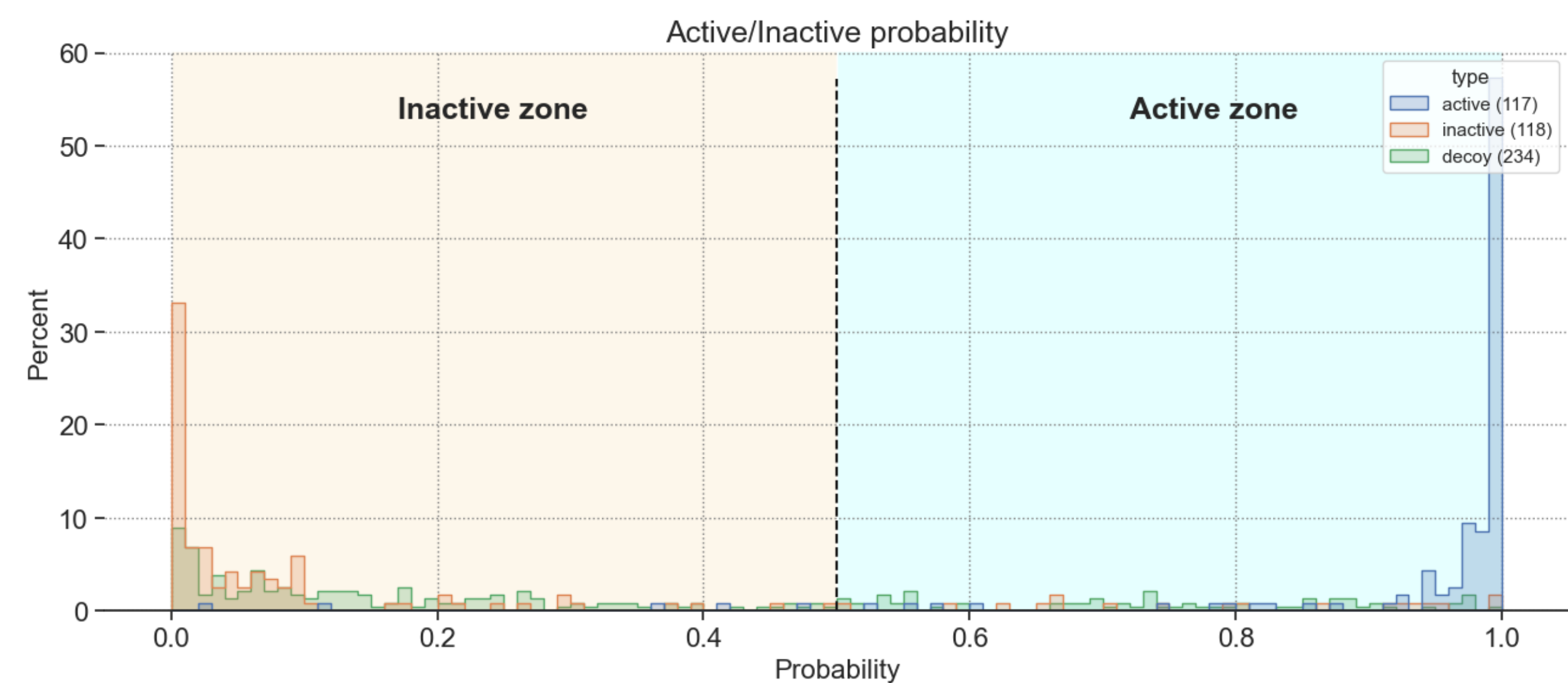
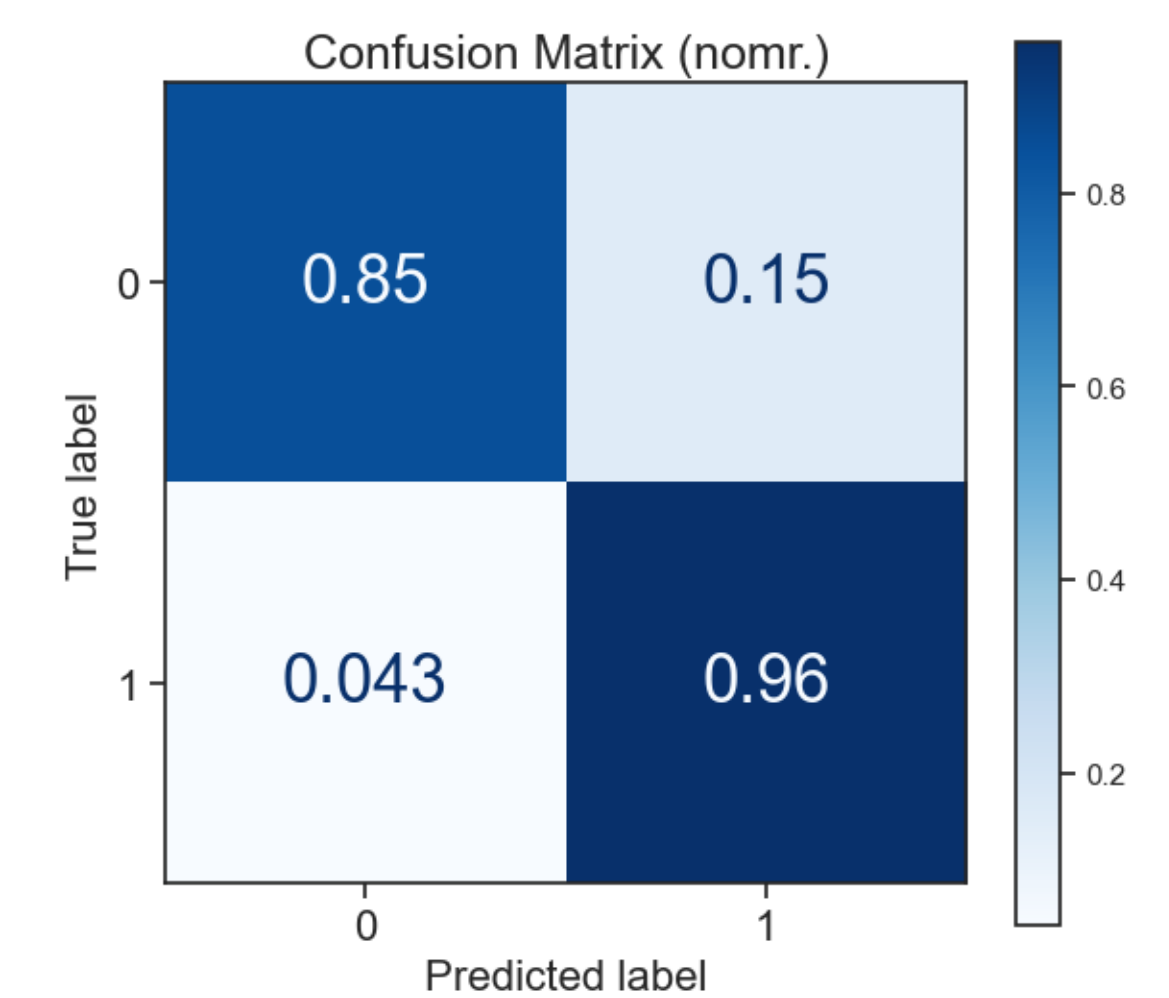
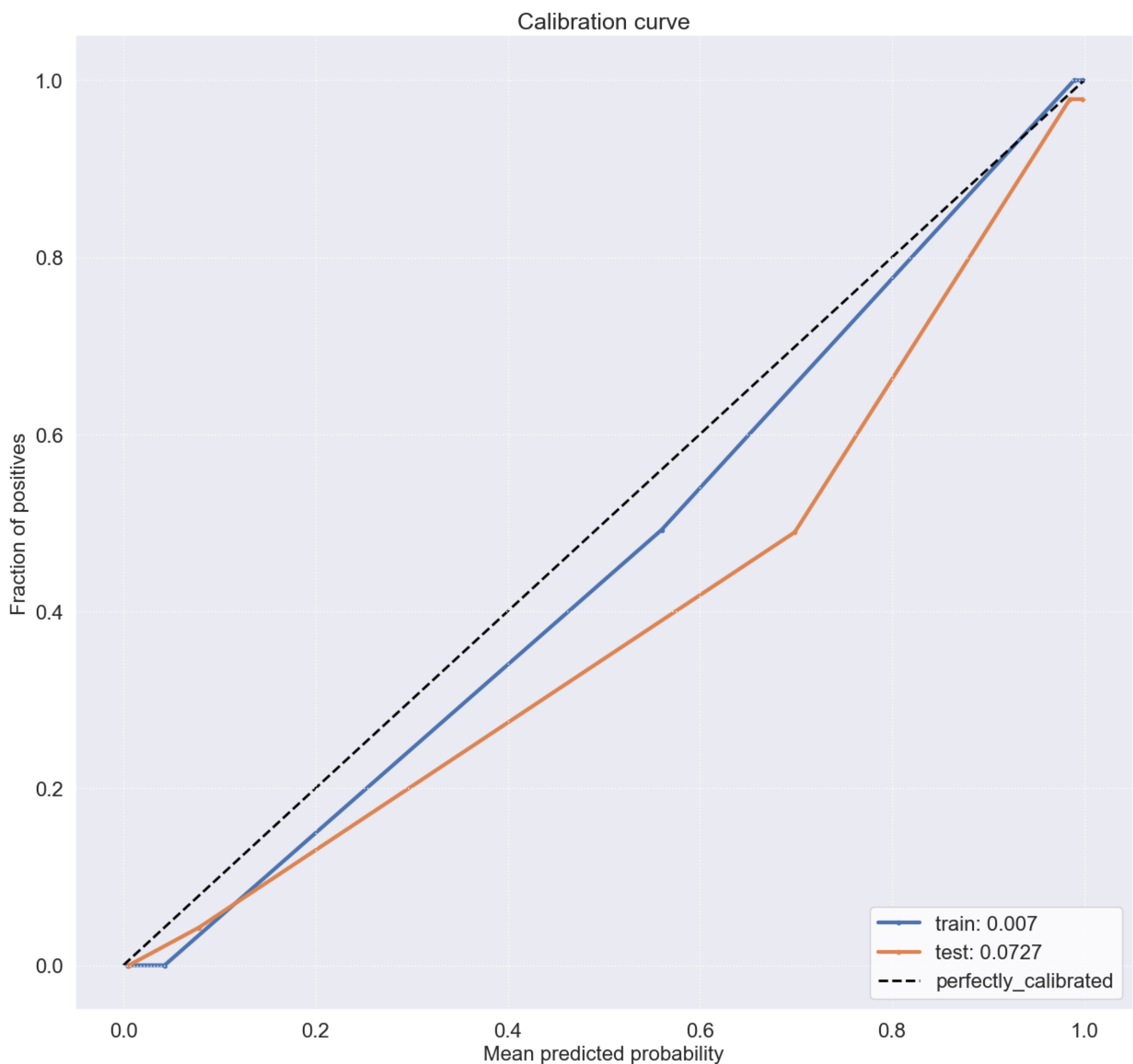
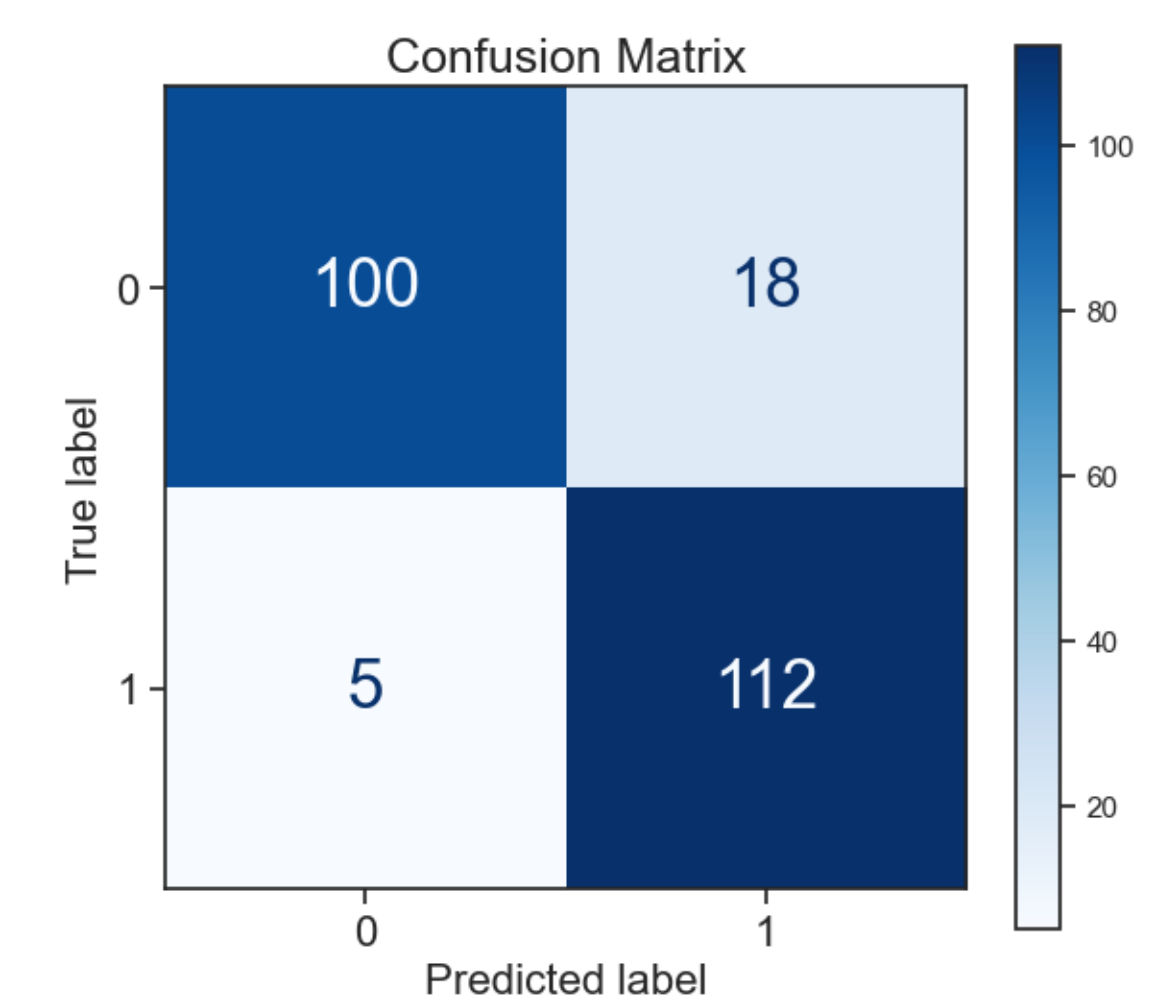


Protein: Q92769 - metric: balanced_accuracy

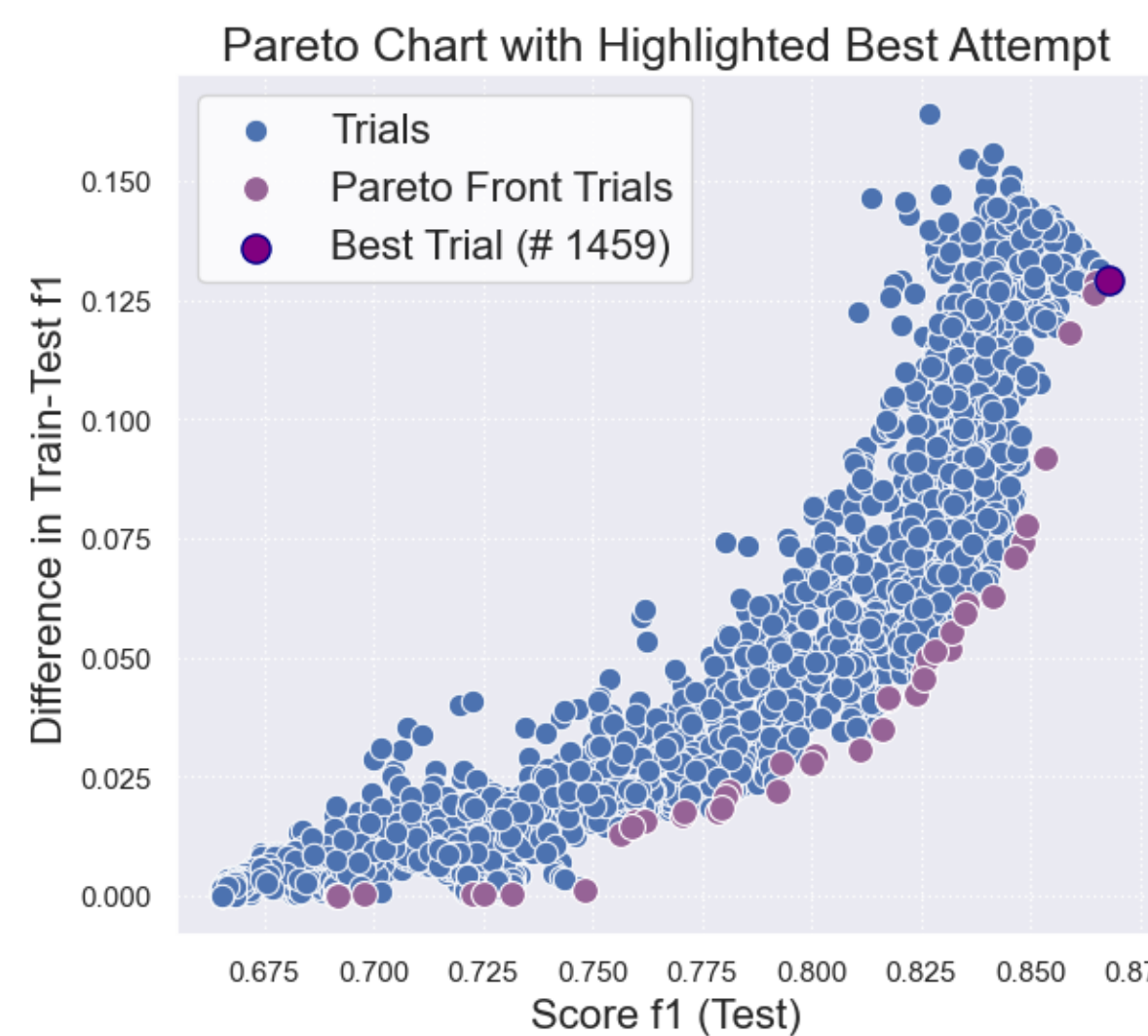
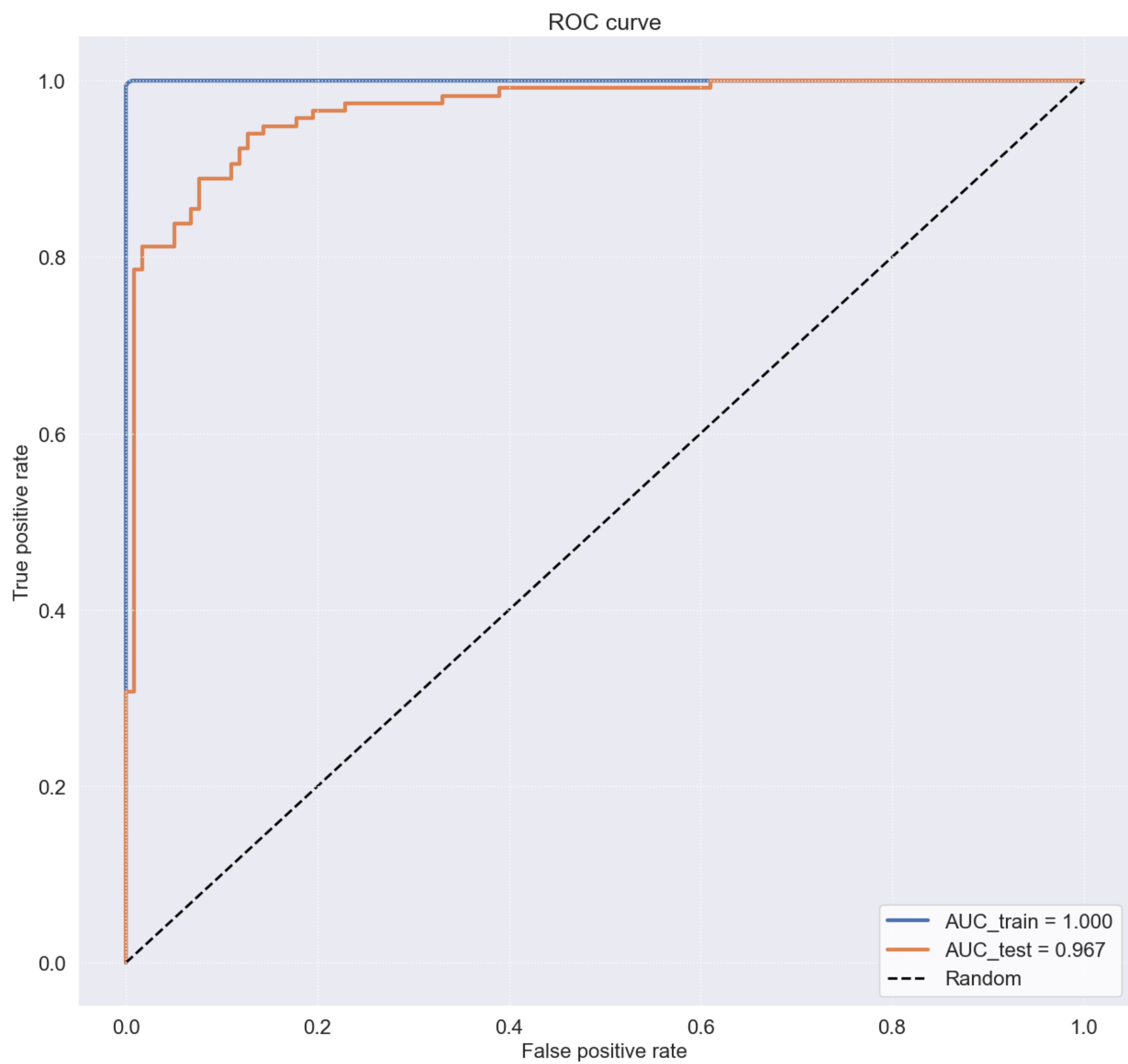
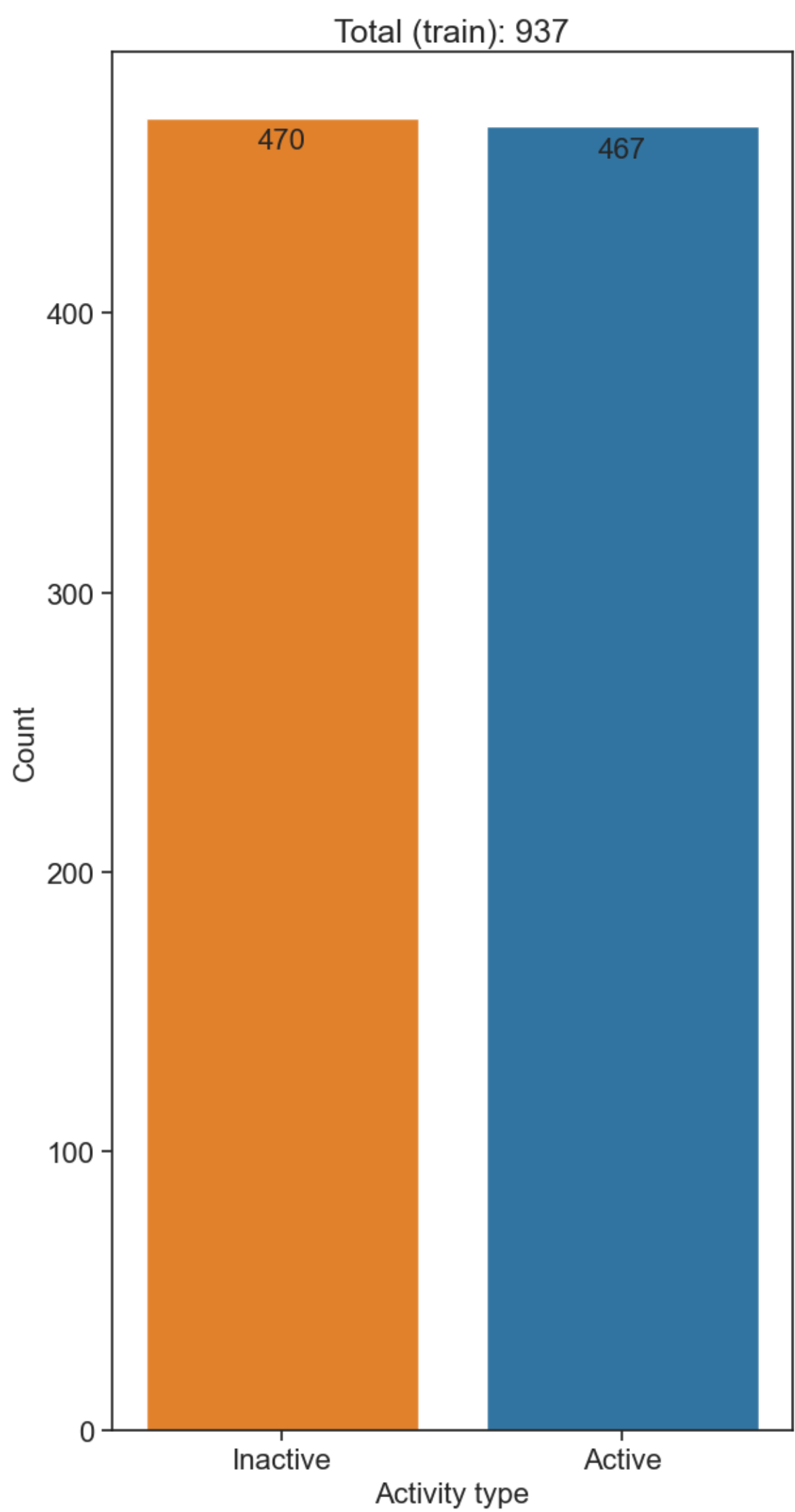


| XGBoost Parameters | Value |
|--------------------|--------|
| alpha | 4.482 |
| colsample_bytree | 0.9916 |
| gamma | 0.1757 |
| lambda | 4.469 |
| learning_rate | 0.1561 |
| max_depth | 10.0 |
| min_child_weight | 3.0 |
| n_estimators | 967.0 |
| reg_alpha | 0.0328 |
| reg_lambda | 0.0118 |
| scale_pos_weight | 3.2947 |
| subsample | 0.961 |

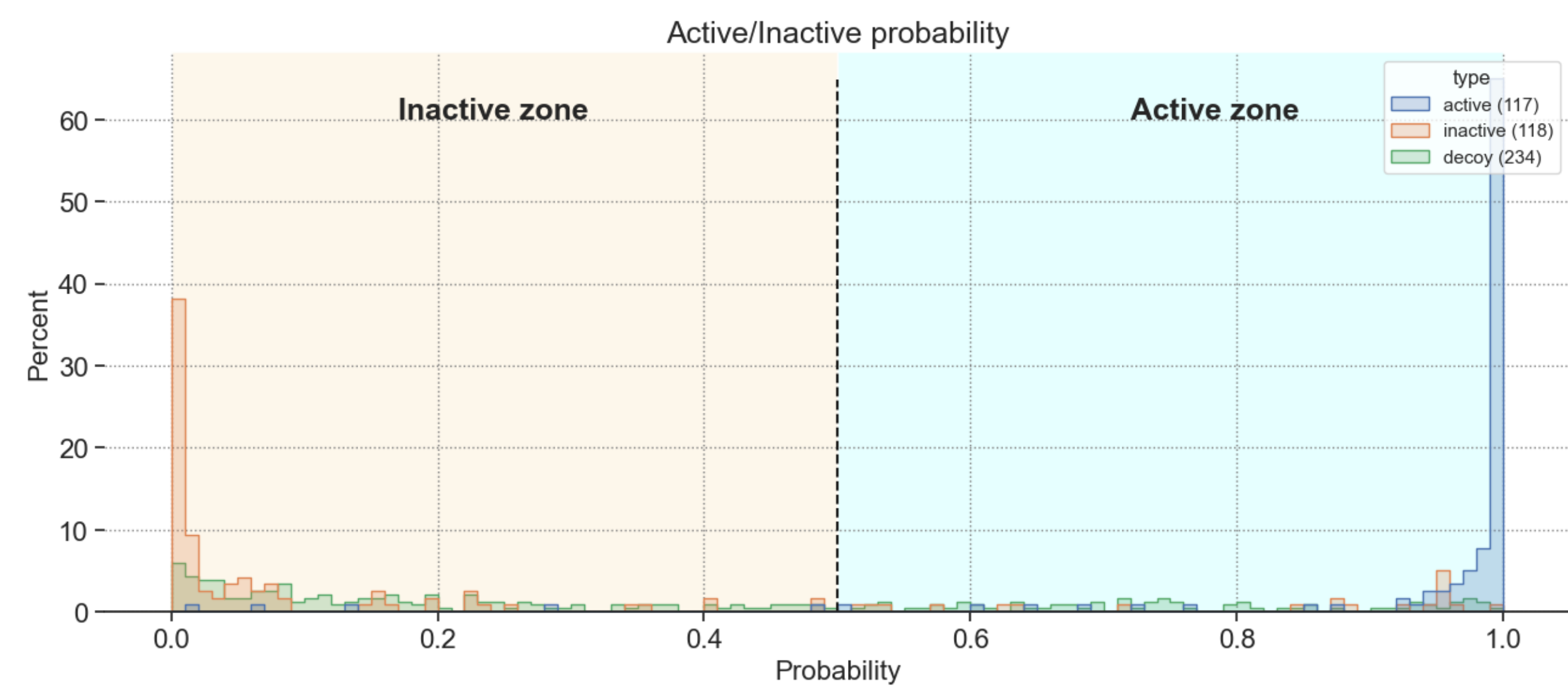
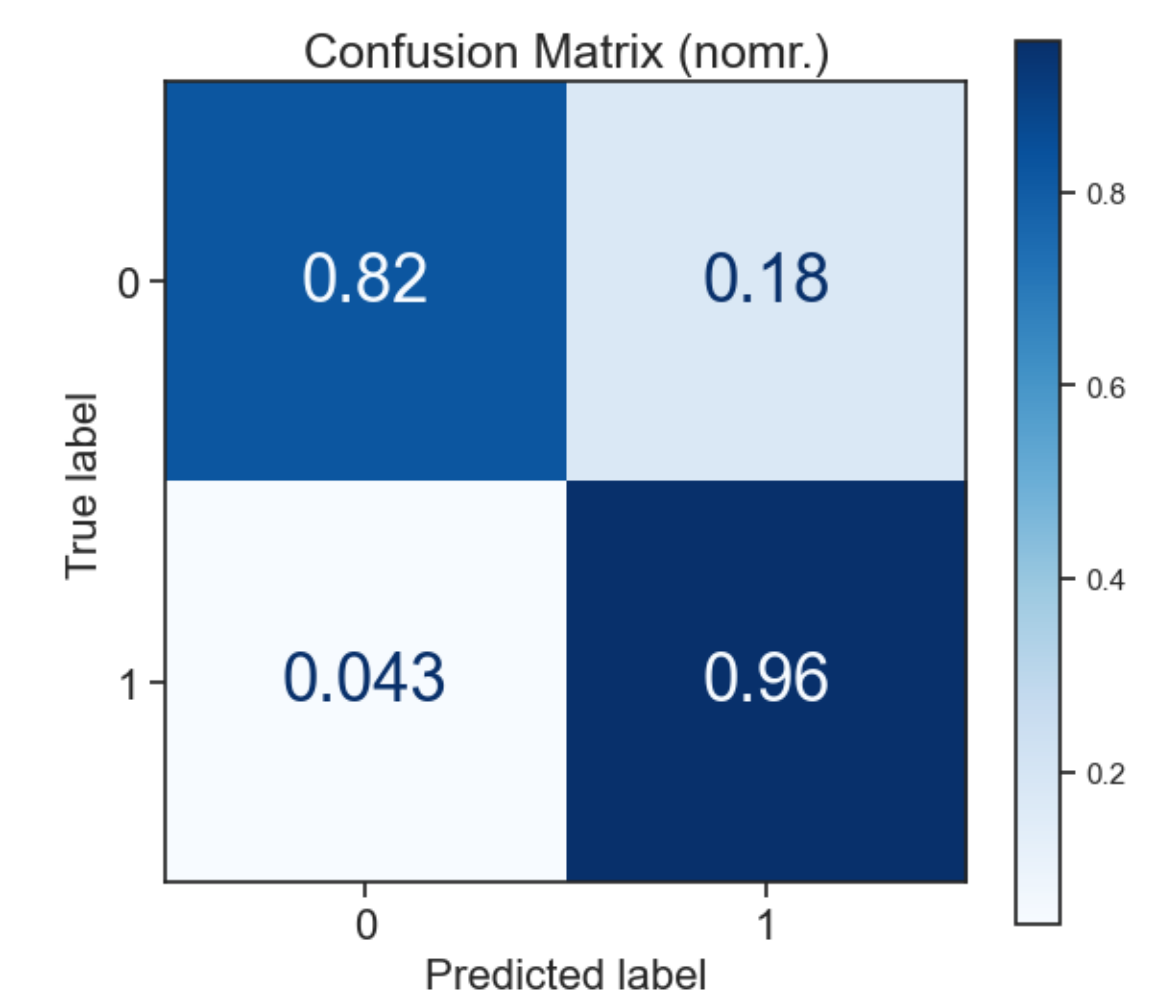
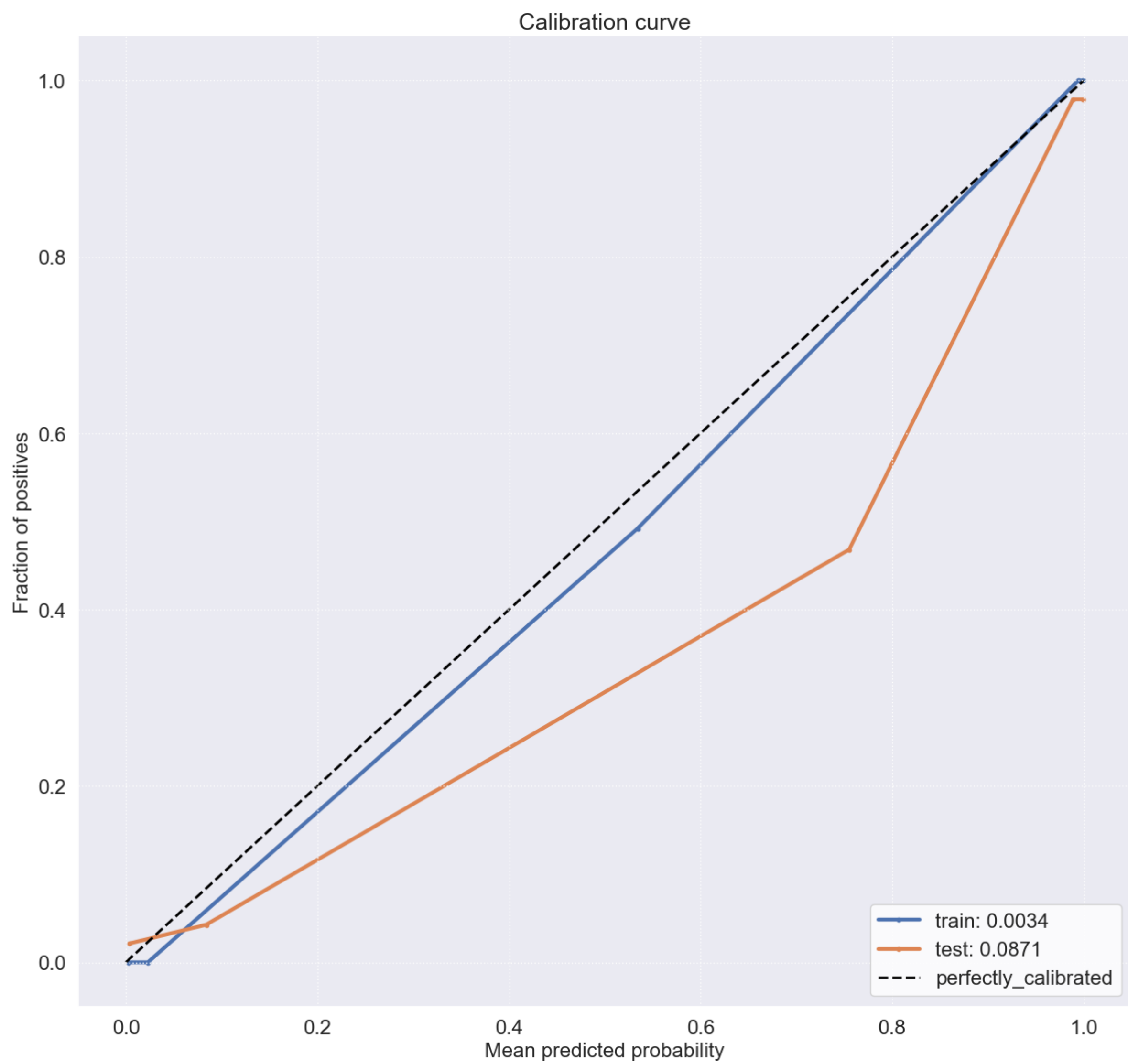
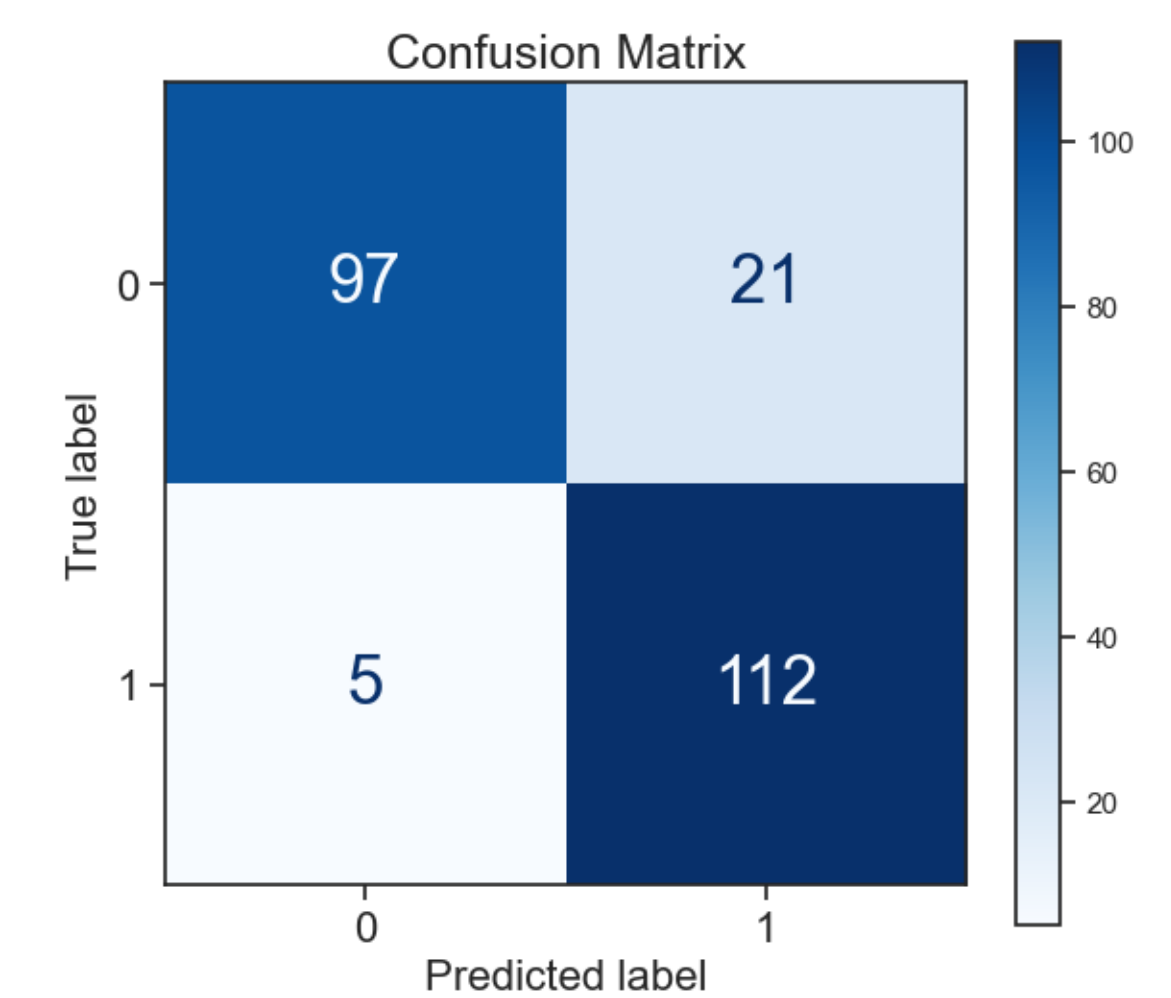


| Metric | Train | Test |
|-------------------|--------|--------|
| AUC | 1.0 | 0.9709 |
| accuracy | 0.9947 | 0.9021 |
| balanced accuracy | 0.9947 | 0.9024 |
| recall_(sens) | 1.0 | 0.9573 |
| specificity | 0.9894 | 0.8475 |
| precision | 0.9894 | 0.8615 |
| f1_score | 0.9947 | 0.9019 |

Protein: Q92769 - metric: f1

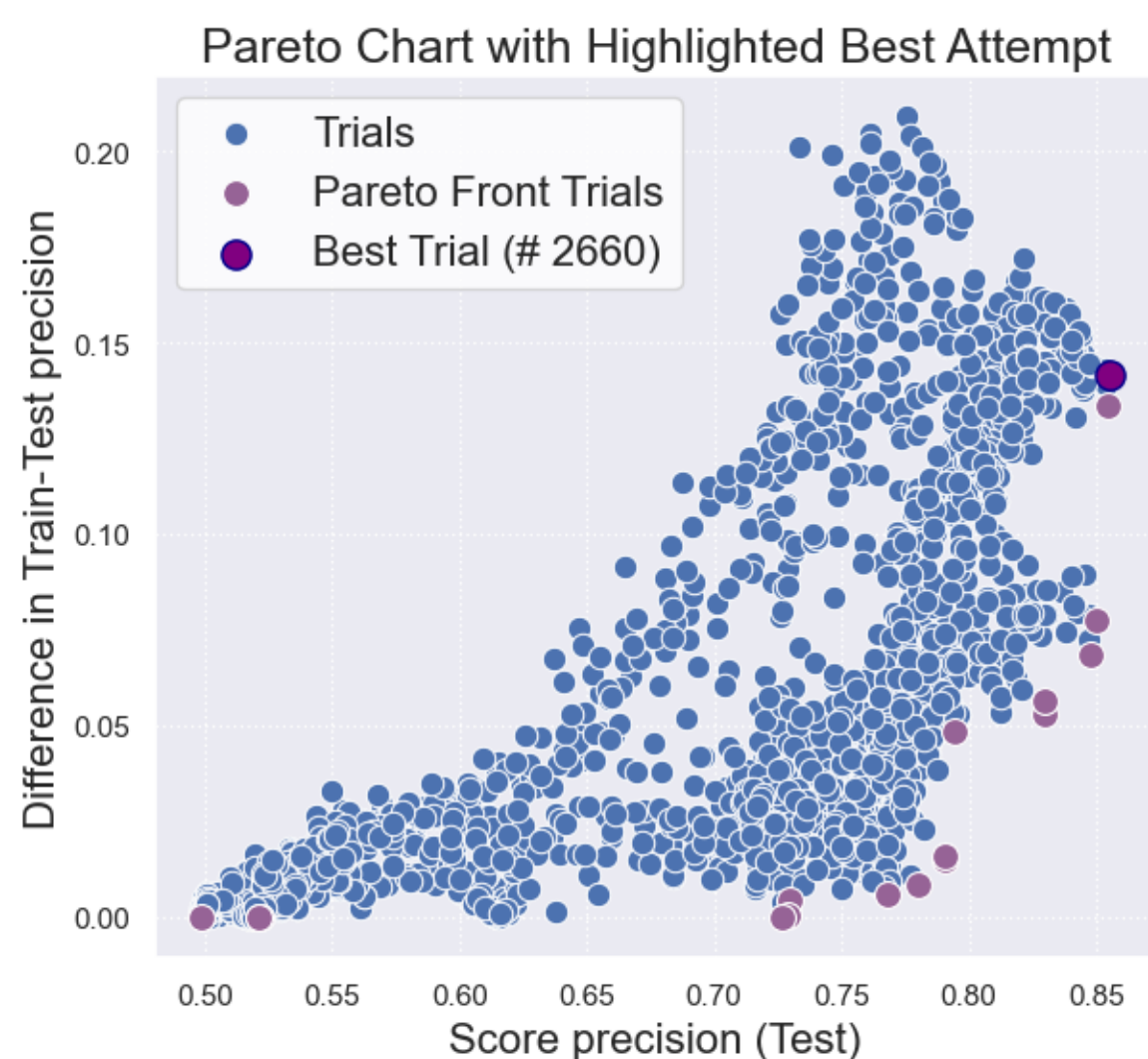
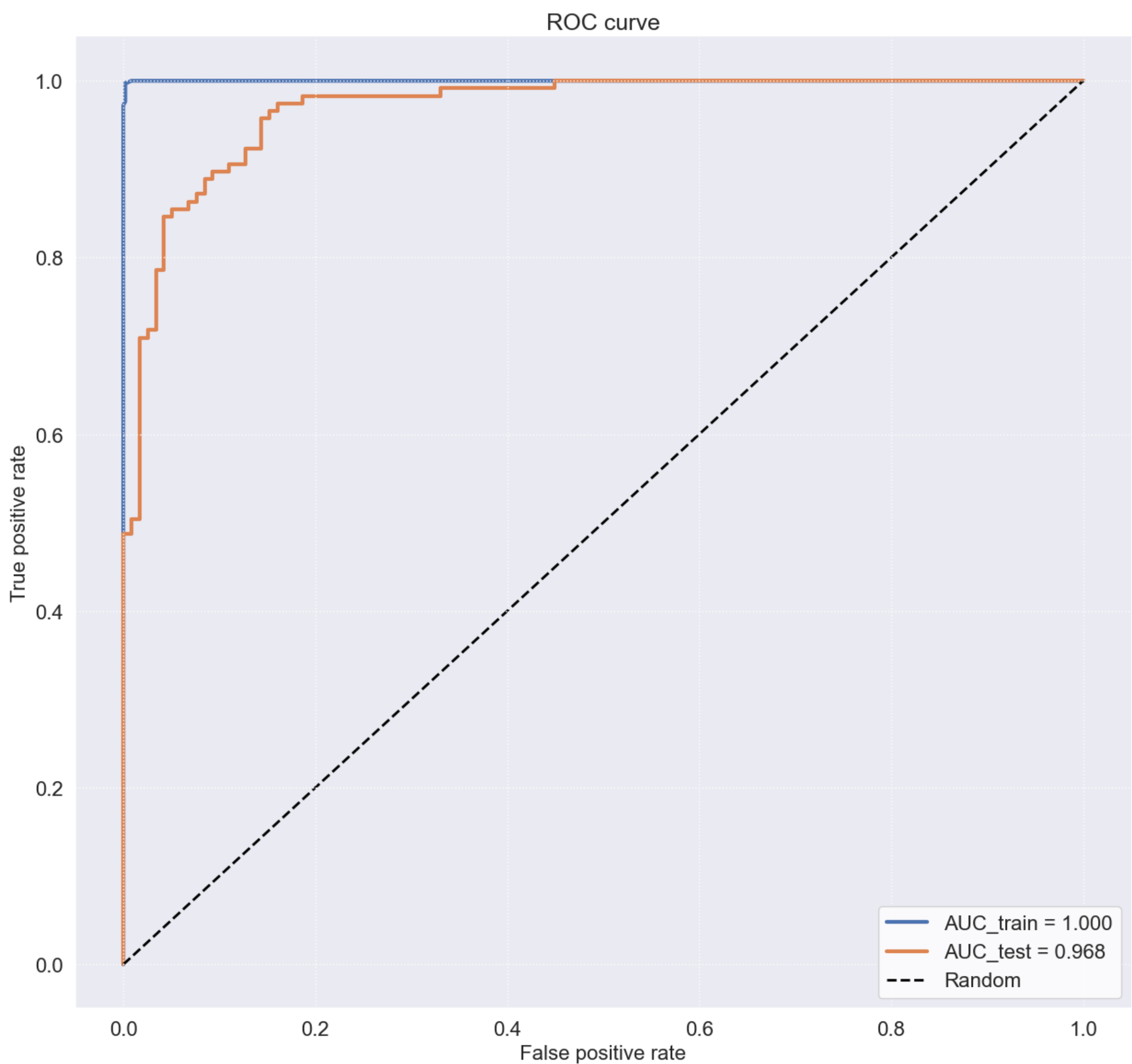
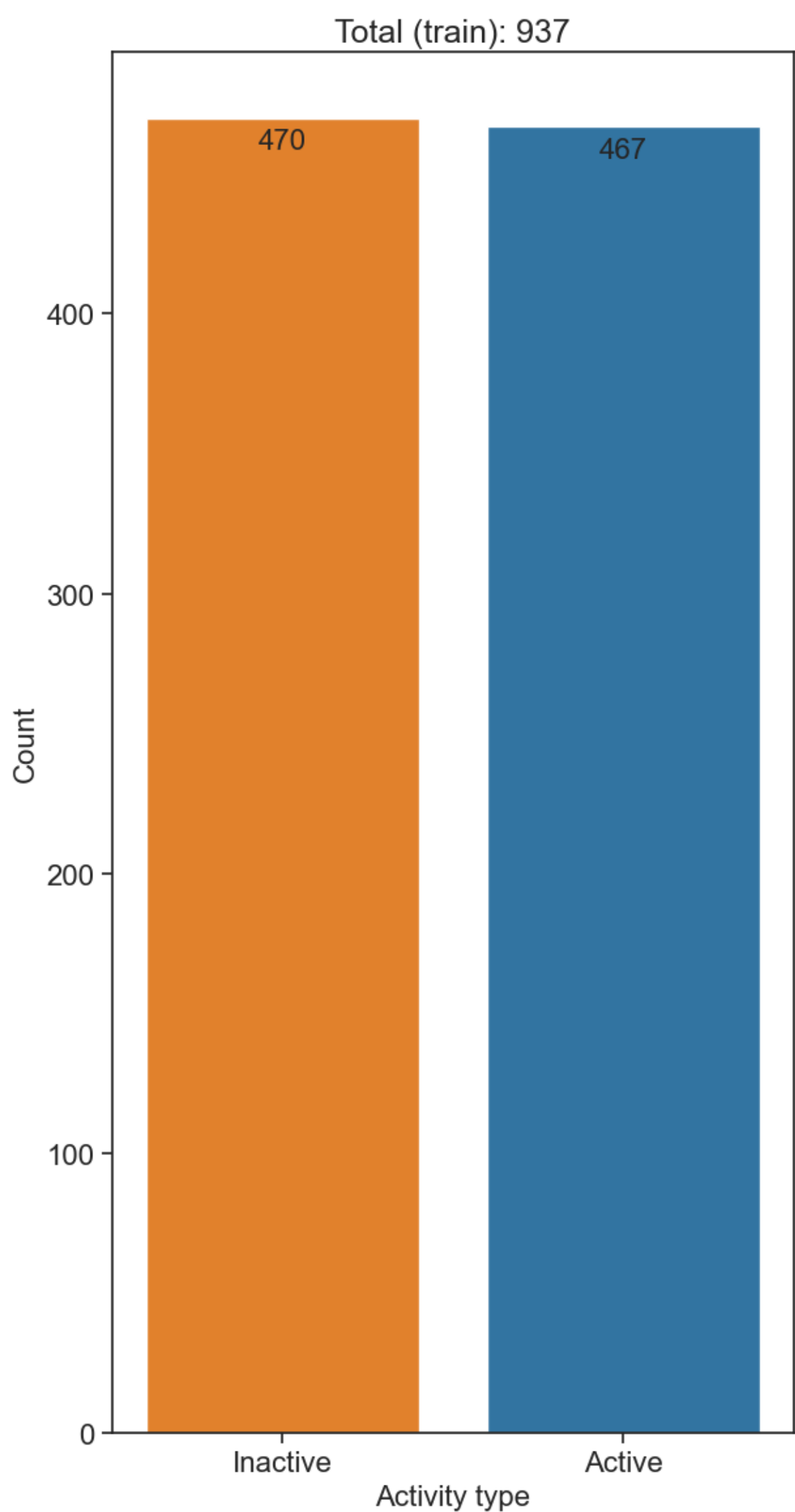


| XGBoost Parameters | Value |
|--------------------|--------|
| alpha | 3.3427 |
| colsample_bytree | 0.7303 |
| gamma | 0.0242 |
| lambda | 3.928 |
| learning_rate | 0.1492 |
| max_depth | 8.0 |
| min_child_weight | 1.0 |
| n_estimators | 376.0 |
| reg_alpha | 0.3282 |
| reg_lambda | 0.5551 |
| scale_pos_weight | 3.4607 |
| subsample | 0.7906 |

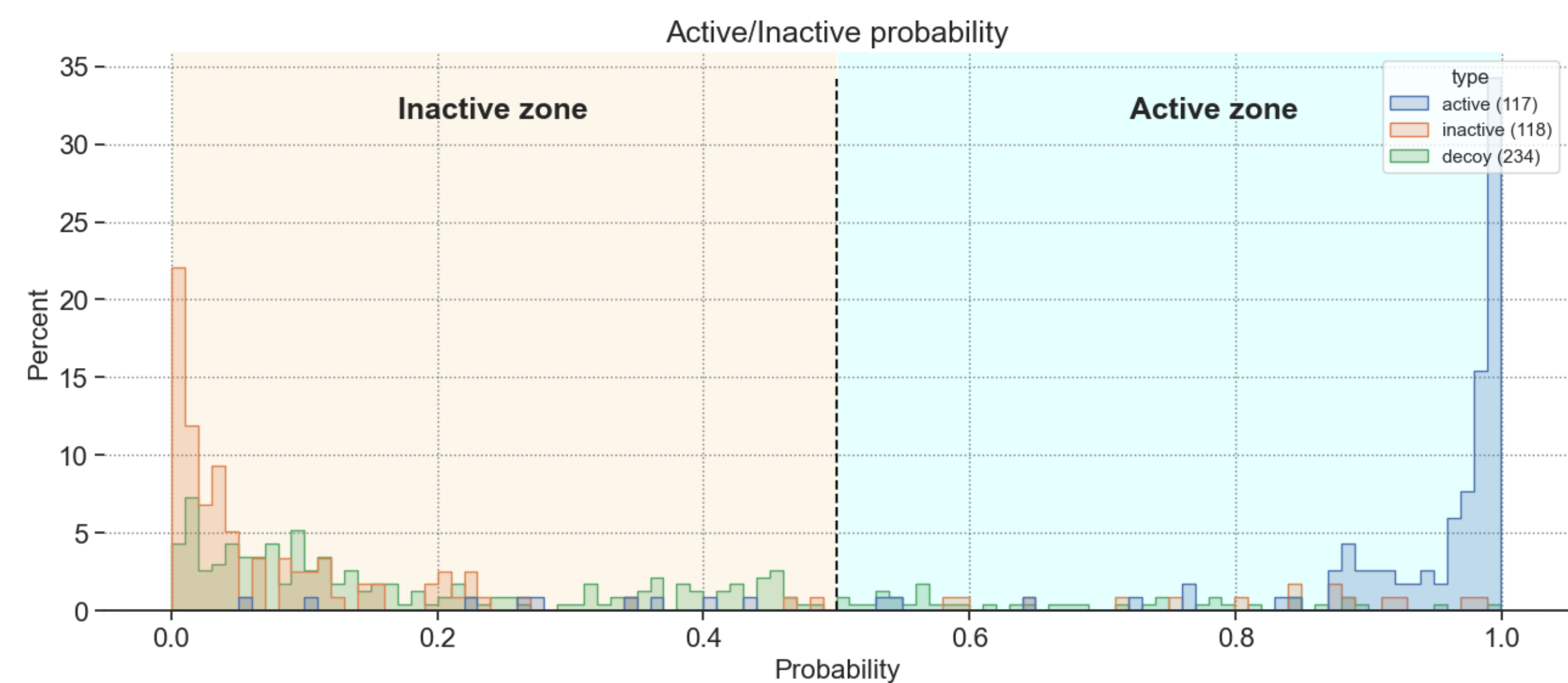
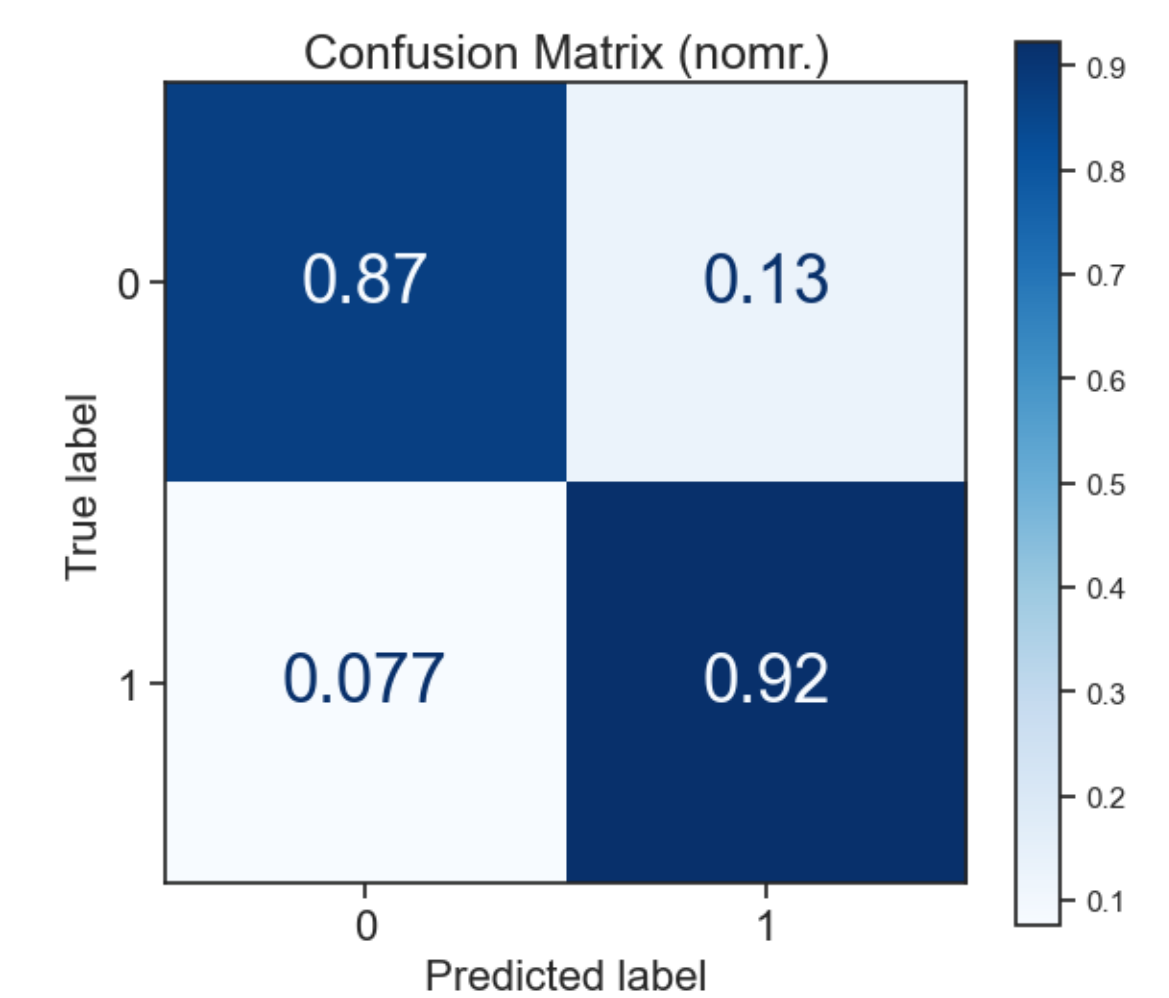
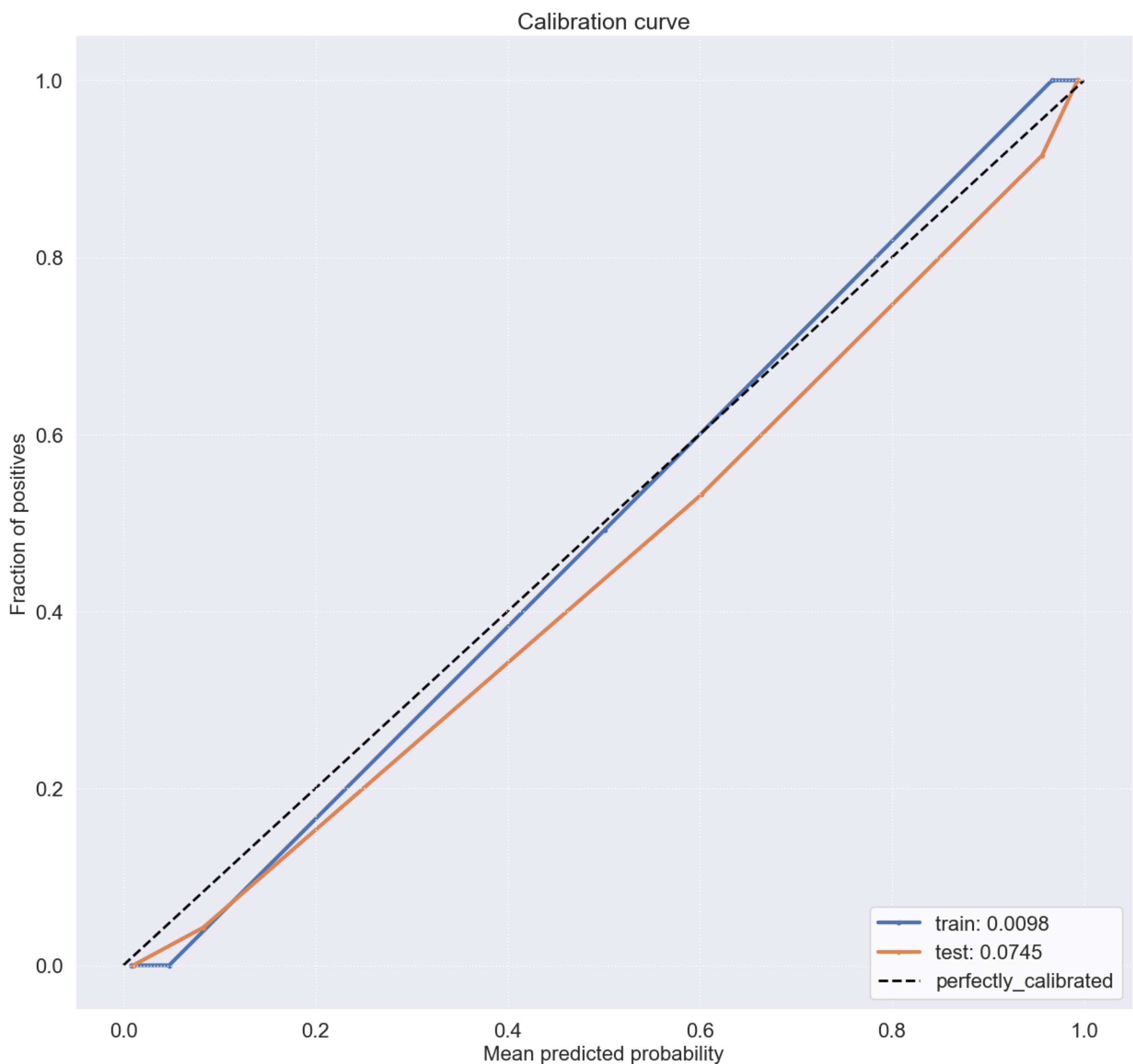
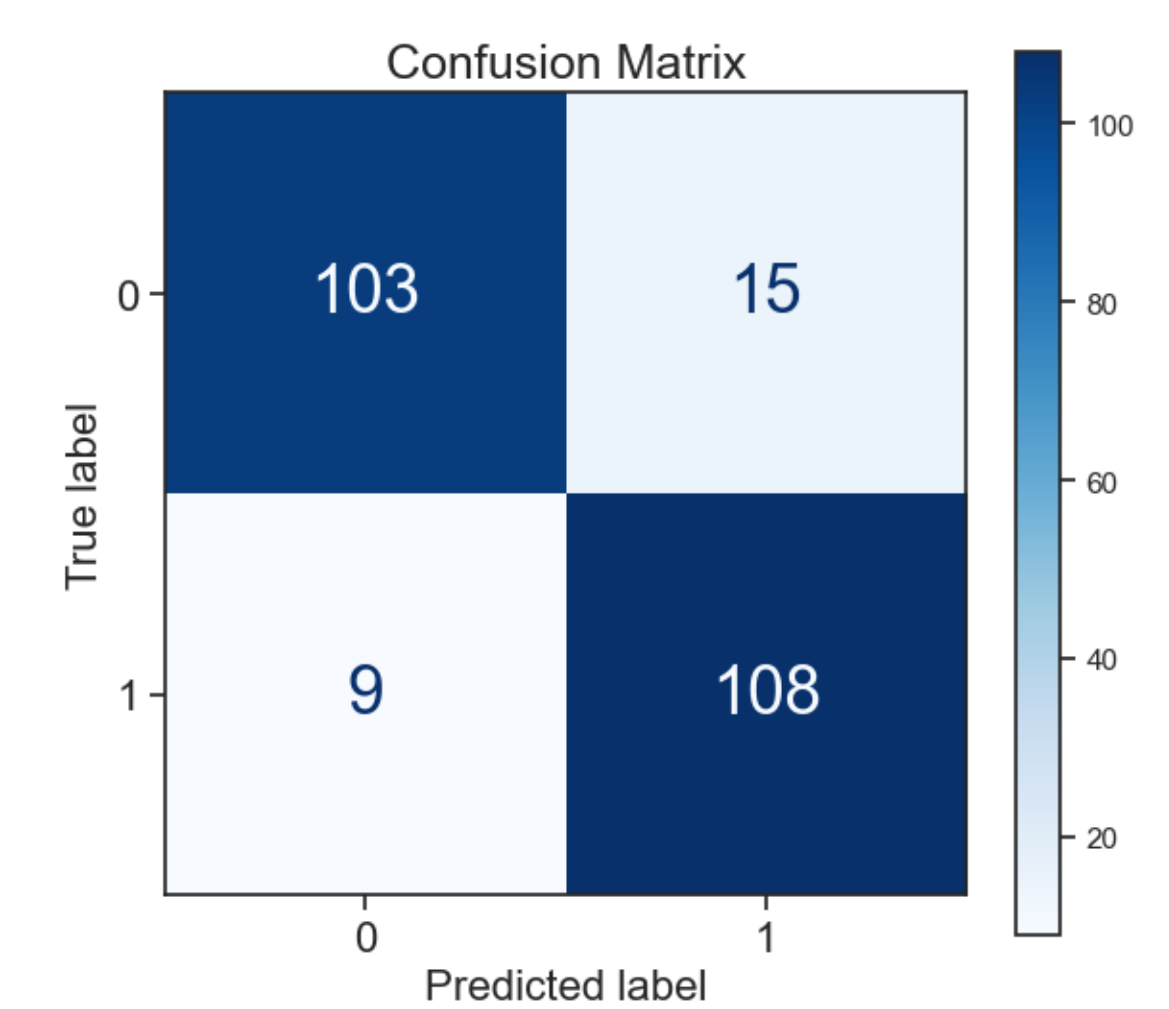


| Metric | Train | Test |
|-------------------|--------|--------|
| AUC | 1.0 | 0.9666 |
| accuracy | 0.9968 | 0.8894 |
| balanced accuracy | 0.9968 | 0.8896 |
| recall_(sens) | 1.0 | 0.9573 |
| specificity | 0.9936 | 0.822 |
| precision | 0.9936 | 0.8421 |
| f1_score | 0.9968 | 0.8889 |

Protein: Q92769 - metric: precision

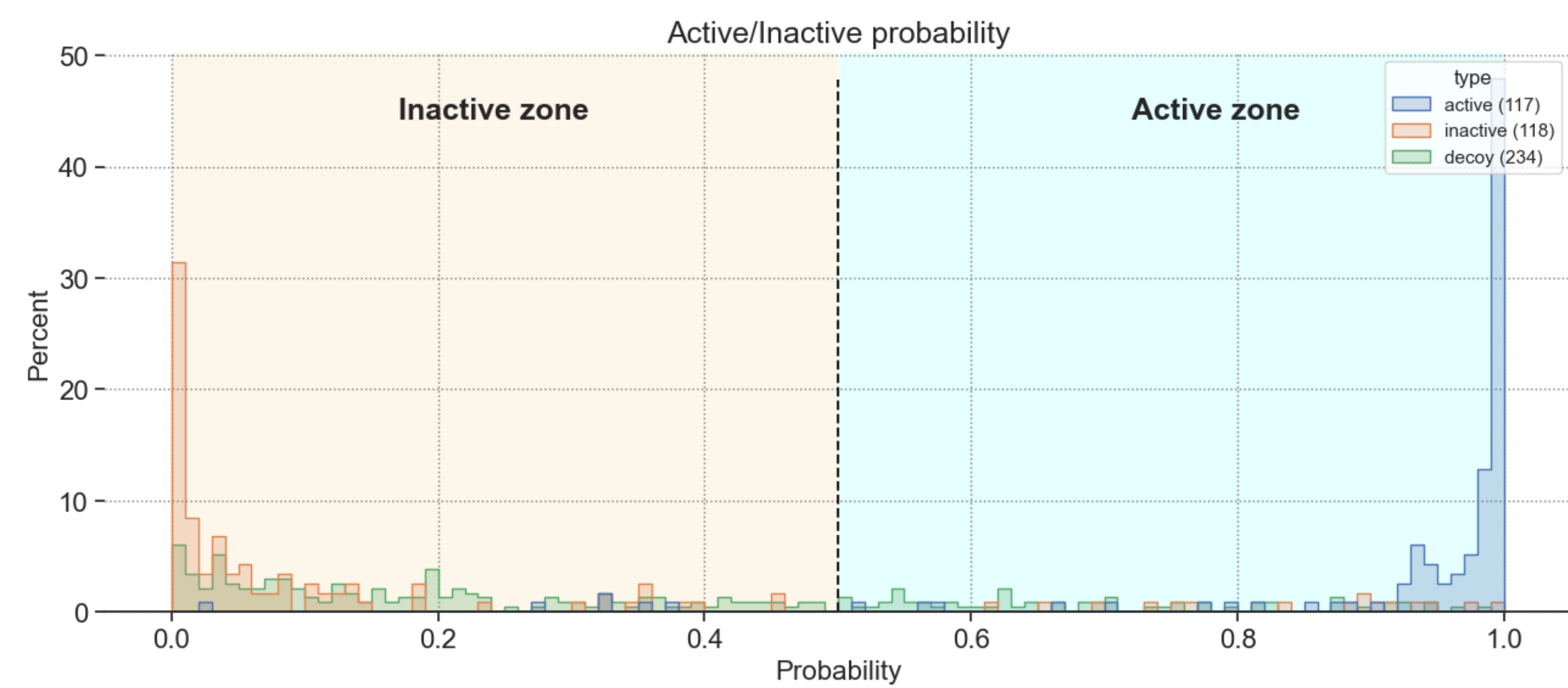
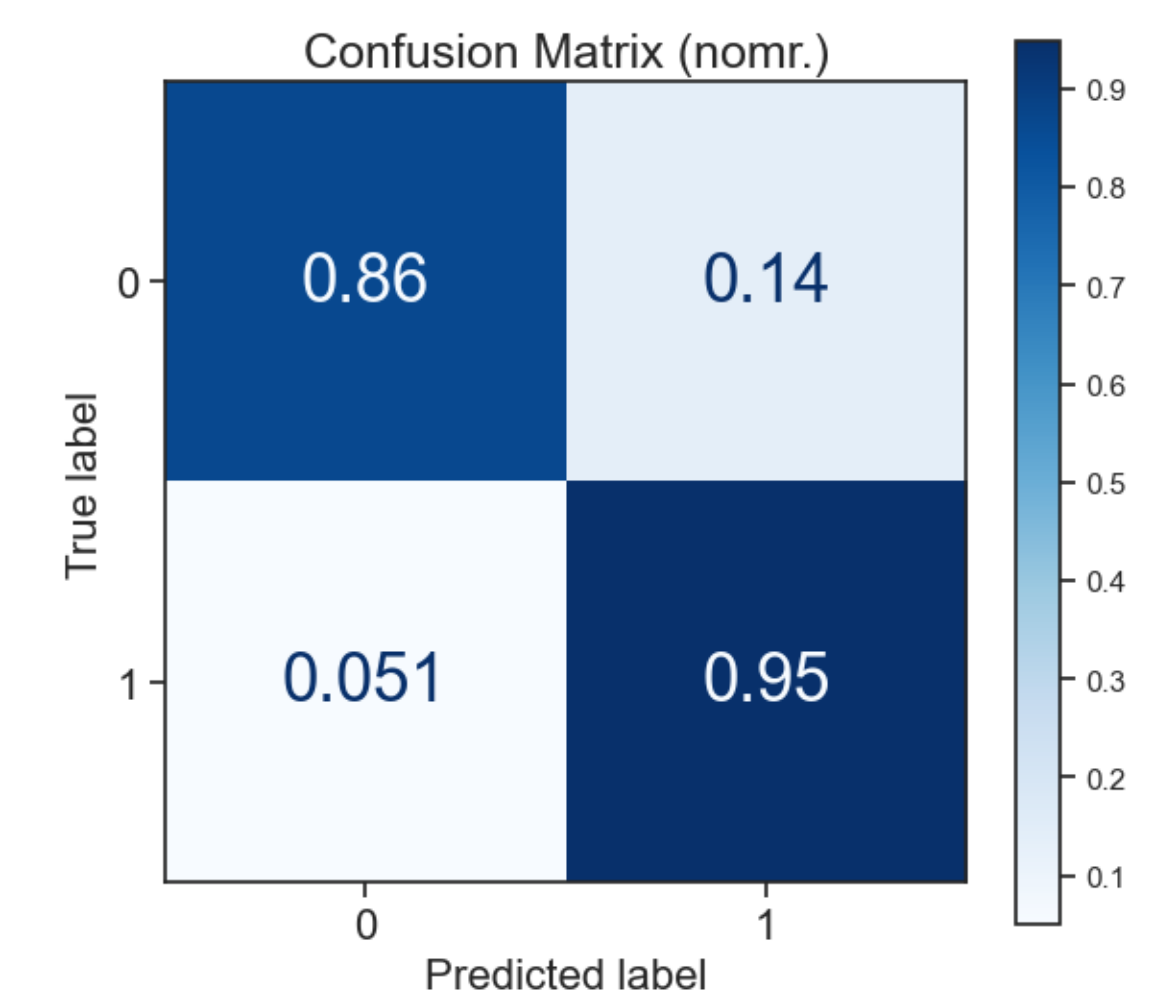
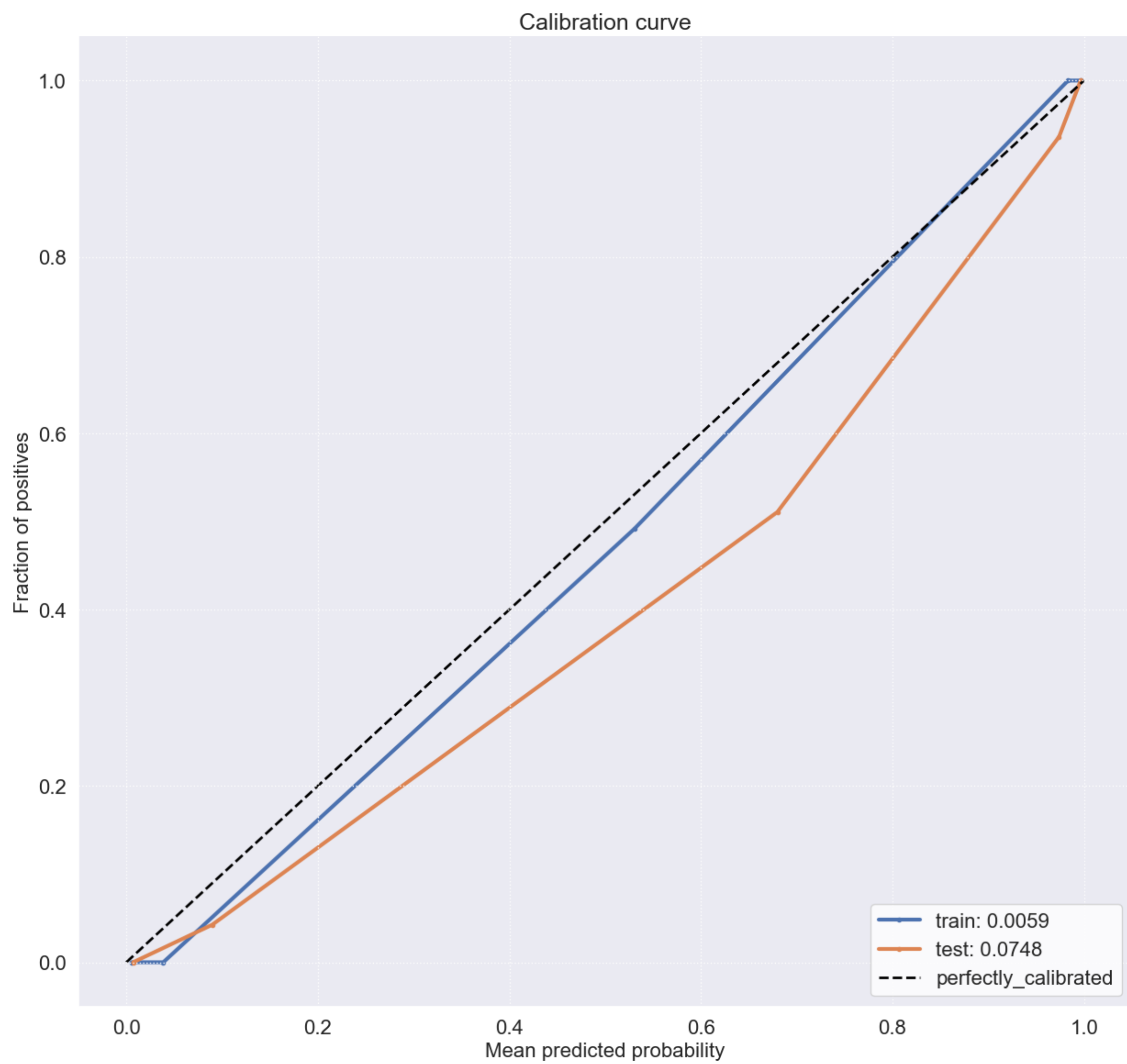
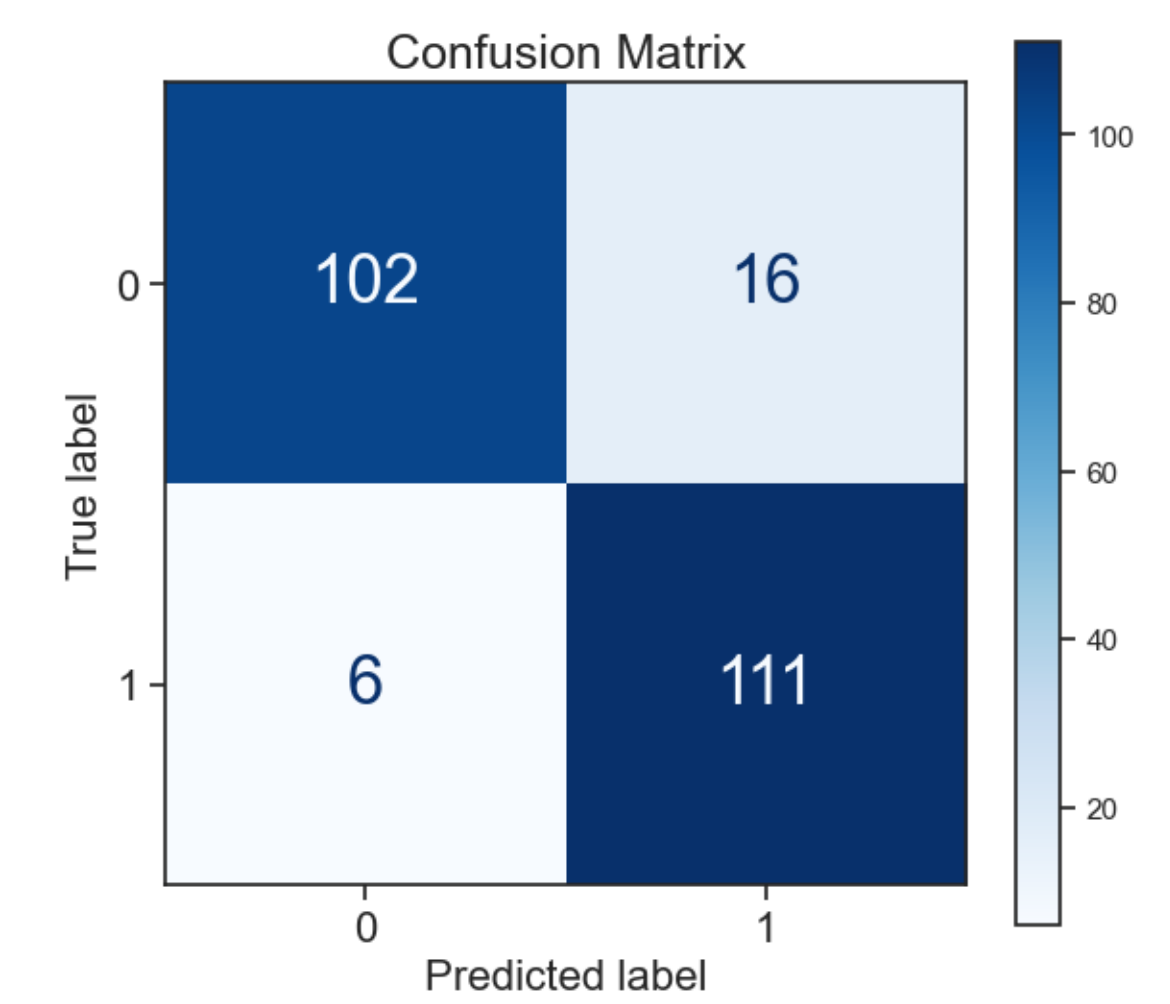
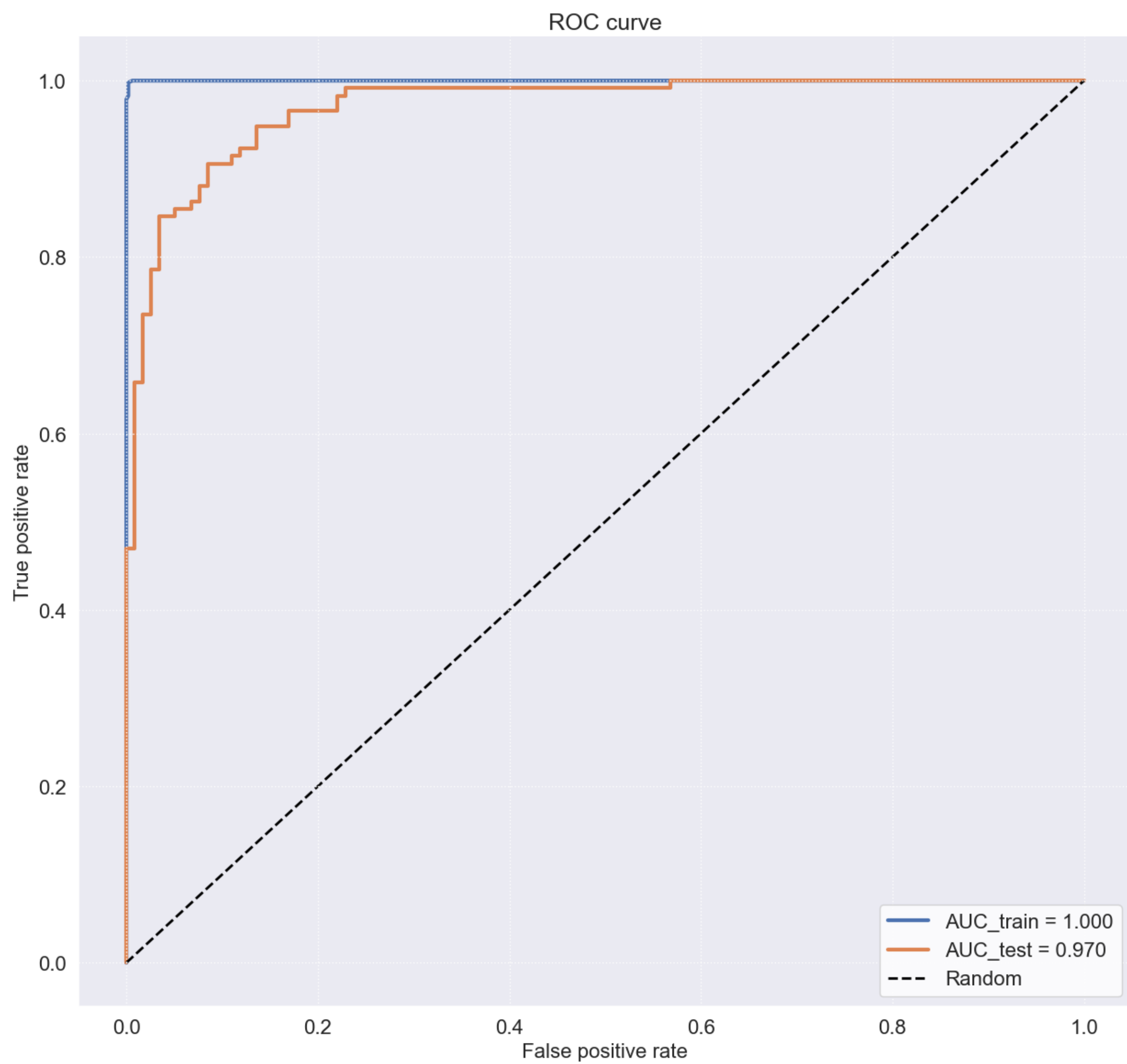
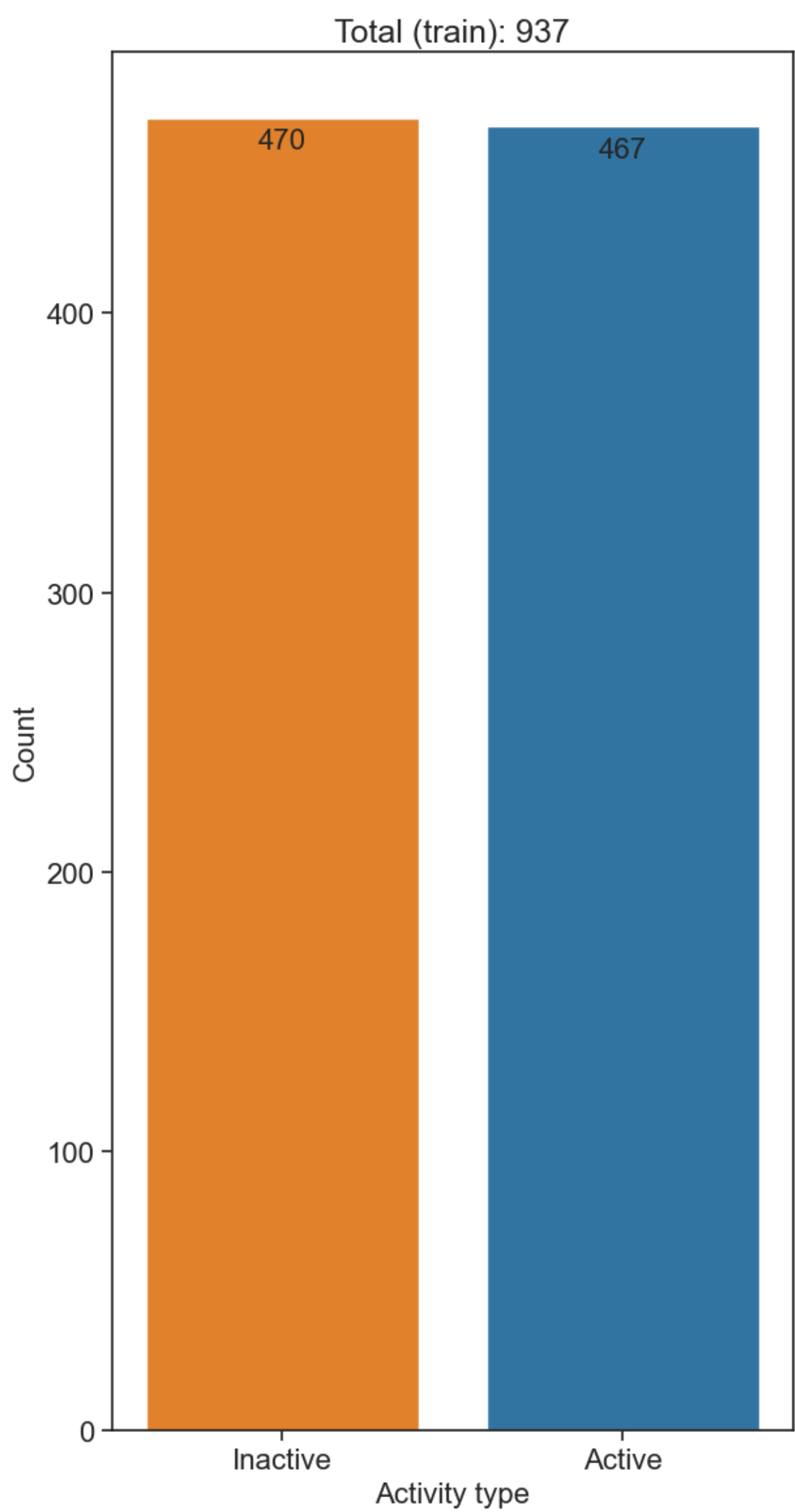


| XGBoost Parameters | Value |
|--------------------|--------|
| alpha | 3.7127 |
| colsample_bytree | 0.9009 |
| gamma | 0.0199 |
| lambda | 0.8909 |
| learning_rate | 0.0915 |
| max_depth | 8.0 |
| min_child_weight | 2.0 |
| n_estimators | 297.0 |
| reg_alpha | 0.055 |
| reg_lambda | 0.6621 |
| scale_pos_weight | 1.2134 |
| subsample | 0.9019 |



| Metric | Train | Test |
|-------------------|--------|--------|
| AUC | 0.9999 | 0.9684 |
| accuracy | 0.9979 | 0.8979 |
| balanced accuracy | 0.9979 | 0.898 |
| recall_(sens) | 0.9979 | 0.9231 |
| specificity | 0.9979 | 0.8729 |
| precision | 0.9979 | 0.878 |
| f1_score | 0.9979 | 0.8978 |

Protein: Q92769 - metric: SoftVotingXGBoostEnsemble



| Metric | Train | Test |
|-------------------|--------|--------|
| AUC | 1.0 | 0.9704 |
| accuracy | 0.9968 | 0.9064 |
| balanced accuracy | 0.9968 | 0.9066 |
| recall_(sens) | 1.0 | 0.9487 |
| specificity | 0.9936 | 0.8644 |
| precision | 0.9936 | 0.874 |
| f1_score | 0.9968 | 0.9062 |