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tivation': 'prelu', 'keras_clf_fit_epochs': 100, 'keras_clf_fit_batch_size': 32}
Mean Train Score: 0.828456882663104
Mean Test Score: 0.5558841971356862
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Rank 21:
Parameters: {'keras_clf_model_units2': 128, 'keras_clf_model_units': 384, 'keras_clf_model_optimizer': 'sgd', 'keras_clf_model_num_layers': 3, 'keras_clf_model_learning_rate': 0.01, 'keras_clf_model_dropout_rate': 0.0, 'keras_clf_model_activation': 'relu', 'keras_clf_fit_epochs': 100, 'keras_clf_fit_batch_size': 32}
Mean Train Score: 0.7770234685053238
Mean Test Score: 0.5325583574314017
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Best parameters found: {'keras_clf_model_units2': 64, 'keras_clf_model_units': 256, 'keras_clf_model_optimizer': 'adam', 'keras_clf_model_num_layers': 2, 'keras_clf_model_learning_rate': 0.0001, 'keras_clf_model_dropout_rate': 0.0, 'keras_clf_model_activation': 'prelu', 'keras_clf_fit_epochs': 200, 'keras_clf_fit_batch_size': 32}
Model: "sequential_150"

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Layer (type)	Output Shape	Param #
dense_522 (Dense)	(None, 256)	476,416
p_re_lu_129 (PReLU)	(None, 256)	256
batch_normalization_372 (BatchNormalization)	(None, 256)	1,024
dense_523 (Dense)	(None, 32)	8,224
p_re_lu_130 (PReLU)	(None, 32)	32
batch_normalization_373 (BatchNormalization)	(None, 32)	128
dense_524 (Dense)	(None, 3)	99

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Total params: 1,457,387 (5.56 MB)
Trainable params: 485,603 (1.85 MB)
Non-trainable params: 576 (2.25 KB)
Optimizer params: 971,208 (3.70 MB)
None
Model saved as pipeline_nn_model.joblib
237/237 ----- 0s 1ms/step
TrainVal set eval:
[[2638 259 29]
 [ 325 2050 179]
 [ 74 265 1762]]
      precision    recall  f1-score   support

     0       0.87       0.90       0.88       2926
     1       0.80       0.80       0.80       2554
     2       0.89       0.84       0.87       2101

   accuracy          0.85          0.85          0.85       7581
  macro avg          0.85          0.85          0.85       7581
weighted avg          0.85          0.85          0.85       7581

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16/16 ----- 0s 639us/step
Test set eval:
[[126 18 23]
 [ 95 70 74]
 [ 24 27 37]]
      precision    recall  f1-score   support

     0       0.51       0.75       0.61       167
     1       0.61       0.29       0.40       239
     2       0.28       0.42       0.33       88

   accuracy          0.47          0.47          0.47       494
  macro avg          0.47          0.49          0.45       494
weighted avg          0.52          0.47          0.46       494

```