Whole dataset: 512 samples

Repeated Nested Cross Validation

1) Create 5 outer folds using only 461 samples (90% of the whole dataset)

Repeat R times
with different seed
(R = 10)

1	Test (outer)	Train (outer)		

Outer CV loop

Preprocessing*

* Inner folds handle hyperparameter tuning without peeking at test data - avoid data leakage

Train (inner)		Test (inner)

2) Create 3 inner folds

Inner CV loop

3) Tune Hyperparameters

4) Use in training fold of outer loop

Model

5) Observe model performance

2

3

4

5

6) Best model selection based on all the outer test folds

7) Use all folds of outer loop to train the best model

8) Use in a kept-out test set (51 samples - 10%) to avoid data leakage