Algorithm 2: Recursive feature elimination incorporating resampling

2.1 **for** *Each Resampling Iteration* **do**
2.2 Partition data into training and test/hold–back set via resampling
2.3 Tune/train the model on the training set using all predictors
2.4 Predict the held–back samples
2.5 Calculate variable importance or rankings
2.6 **for** *Each subset size* S_i, $i = 1 \ldots S$ **do**
2.7 Keep the S_i most important variables
2.8 [Optional] Pre–process the data
2.9 Tune/train the model on the training set using S_i predictors
2.10 Predict the held–back samples
2.11 [Optional] Recalculate the rankings for each predictor
2.12 **end**
2.13 **end**
2.14 Calculate the performance profile over the S_i using the held–back samples
2.15 Determine the appropriate number of predictors
2.16 Estimate the final list of predictors to keep in the final model
2.17 Fit the final model based on the optimal S_i using the original training set