Forester report

version 1.2.1

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This report contains details about the best trained model, table with metrics for every trained model, scatter plot for chosen metric and info about used data.

The best models

This is the **binary_clf** task.
The best model is: **ranger_model**.

The names of the models were created by a pattern *Engine_TuningMethod_Id*, where:

- Engine describes the engine used for the training (random_forest, xgboost, decision_tree, lightgbm, catboost),
- TuningMethod describes how the model was tuned (basic for basic parameters, RS for random search, bayes for Bayesian optimization),
- Id for separating the random search parameters sets.

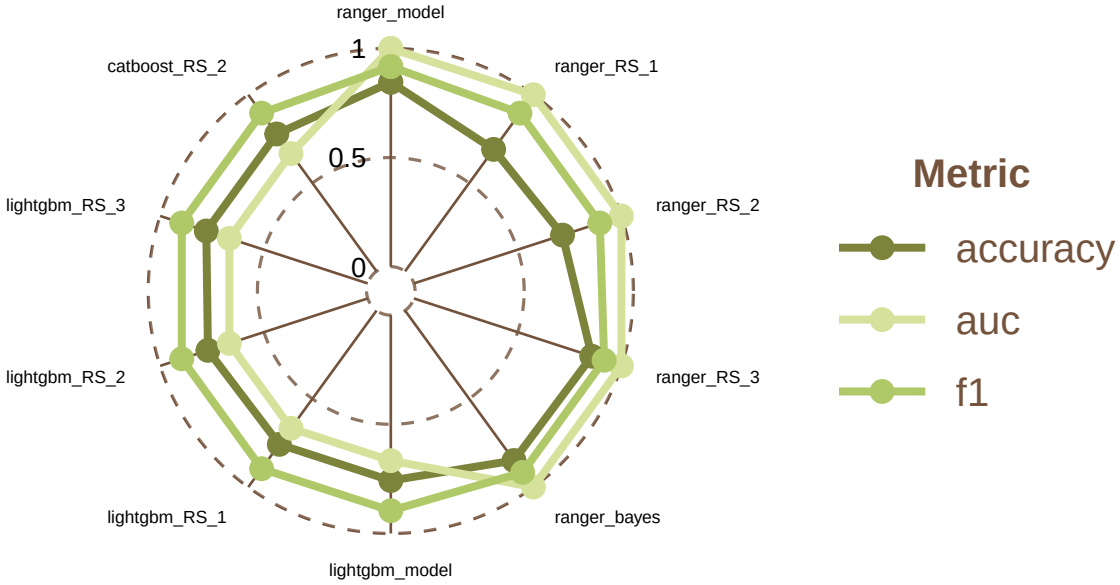
More details about the best model are present at the end of the report.

no.	name	accuracy	auc	f1
1	ranger_model	1.0000	0.9167	0.8452
6	ranger_RS_1	1.0000	0.8958	0.6905
7	ranger_RS_2	1.0000	0.8958	0.7163
8	ranger_RS_3	1.0000	0.9167	0.8571
21	ranger_bayes	1.0000	0.9167	0.8492
4	lightgbm_model	0.6667	0.8958	0.7579
15	lightgbm_RS_1	0.6667	0.8958	0.7579
16	lightgbm_RS_2	0.6667	0.8958	0.7698
17	lightgbm_RS_3	0.6667	0.8958	0.7778
19	catboost_RS_2	0.6667	0.8958	0.7778
24	lightgbm_bayes	0.6667	0.8958	0.7421
25	catboost_bayes	0.6667	0.8958	0.8294
9	xgboost_RS_1	0.5000	0.8750	0.6389
10	xgboost_RS_2	0.5000	0.8750	0.6468
11	xgboost_RS_3	0.5000	0.8750	0.6468
2	xgboost_model	0.0000	0.8542	0.7976
18	catboost_RS_1	0.0000	0.8333	0.8373
3	decision_tree_model	NaN	0.8750	0.5000
5	catboost_model	NaN	0.8750	0.8056
12	decision_tree_RS_1	NaN	0.8750	0.5000

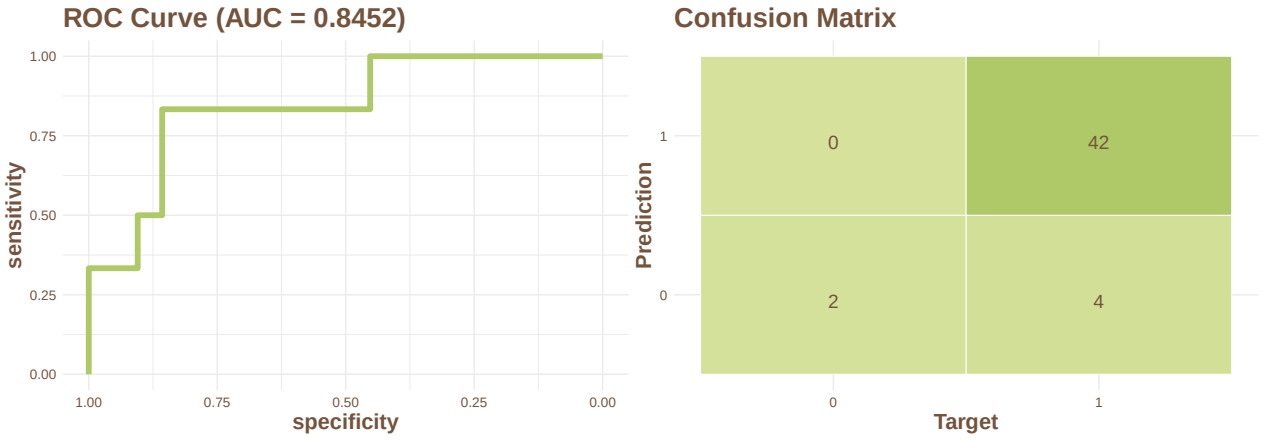
no.	name	accuracy	auc	f1
13	decision_tree_RS_2	NaN	0.8750	0.5000
14	decision_tree_RS_3	NaN	0.8750	0.5000
20	catboost_RS_3	NaN	0.8750	0.7857
22	xgboost_bayes	NaN	0.8750	0.7083
23	decision_tree_bayes	NaN	0.8750	0.5000

Plots for all models

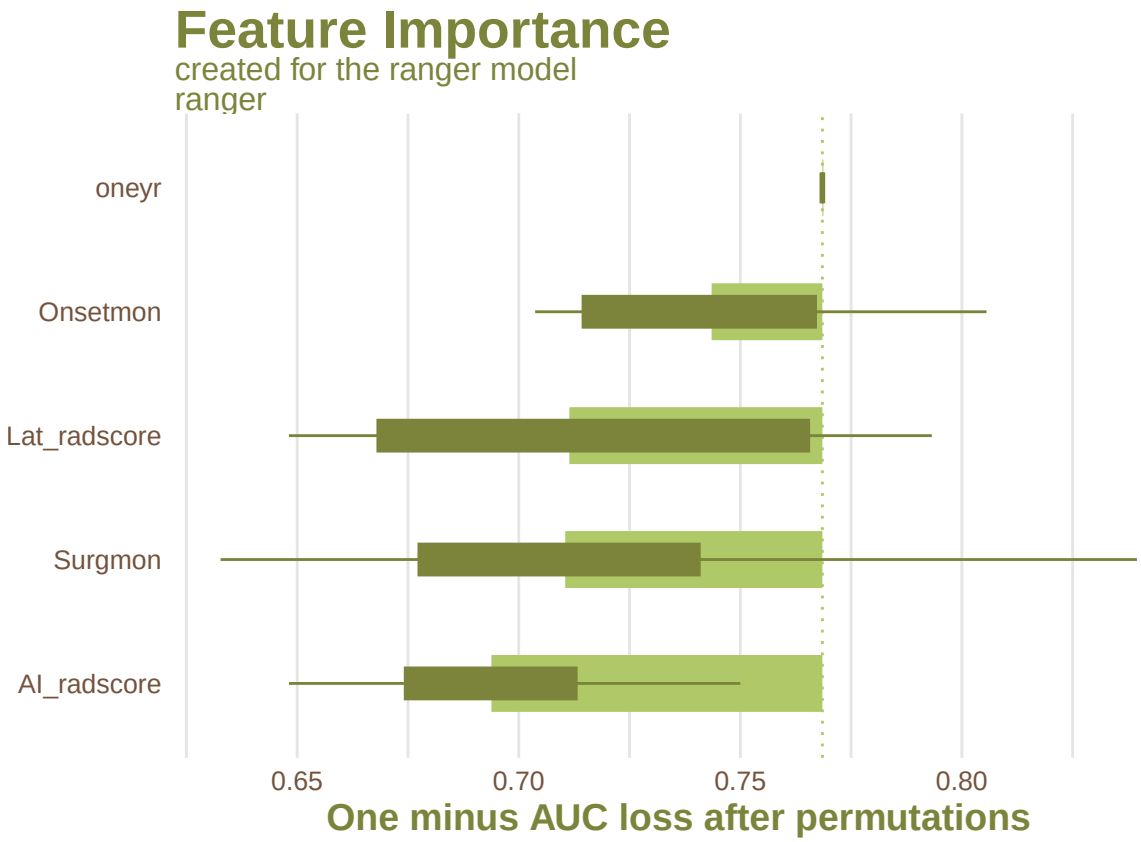
Model comparison



Plots for the best model - ranger_model



Feature Importance for the best model - ranger_model



Details about data

CHECK DATA REPORT

The dataset has 234 observations and 18 columns which names are:

oneyr; AI_radscore; Lat_radscore; side; Sex; Surgmon; Onsetmon; Durmon; Freq; SE; SGS; early_brain_injury; familial_epilepsy; brain_hypoxia; Central_Nervous_System_Infections; traumatic_brain_injury; history_of_previous_surgery; MRI;

With the target value described by a column: oneyr.

No static columns.

No duplicate columns.

No target values are missing.

No predictor values are missing.

No issues with dimensionality.

No strongly correlated, by Spearman rank, pairs of numerical values.

There are more than 50 possible outliers in the data set, so we are not printing them. They are returned in the output as a vector.

Dataset is unbalanced with: 7.357143 proportion with 0 being a dominating class.

Columns names suggest that none of them are IDs.

Columns data suggest that none of them are IDs.

CHECK DATA REPORT END

The best model details

```
------------ Ranger model ------------

Parameters
  num.trees: 500
  ntry: 2
  num.samples: 138
  min.node.size: 10
```