Measurement overview!

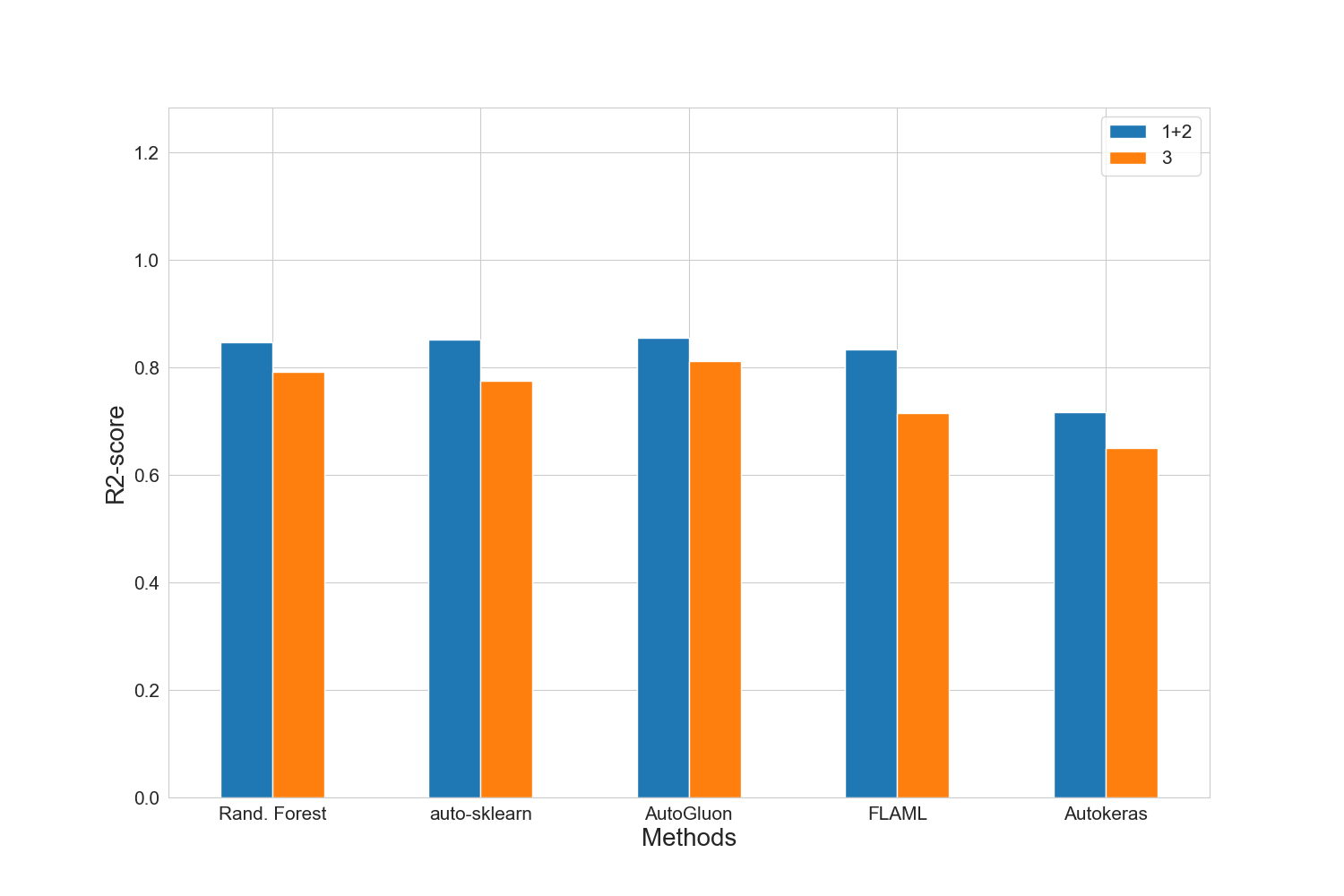
* Measurement date: 2024-12-12
* Random seed: 1
* Number of PCA calculated features: 0
* Outliert detection per bin: True

# Results for merged-files

* Input data file name: merged-files-final-selected-features-2023-12-12.csv
* Input data file creation date: 2023-12-12
* Number of processed data points: 2804

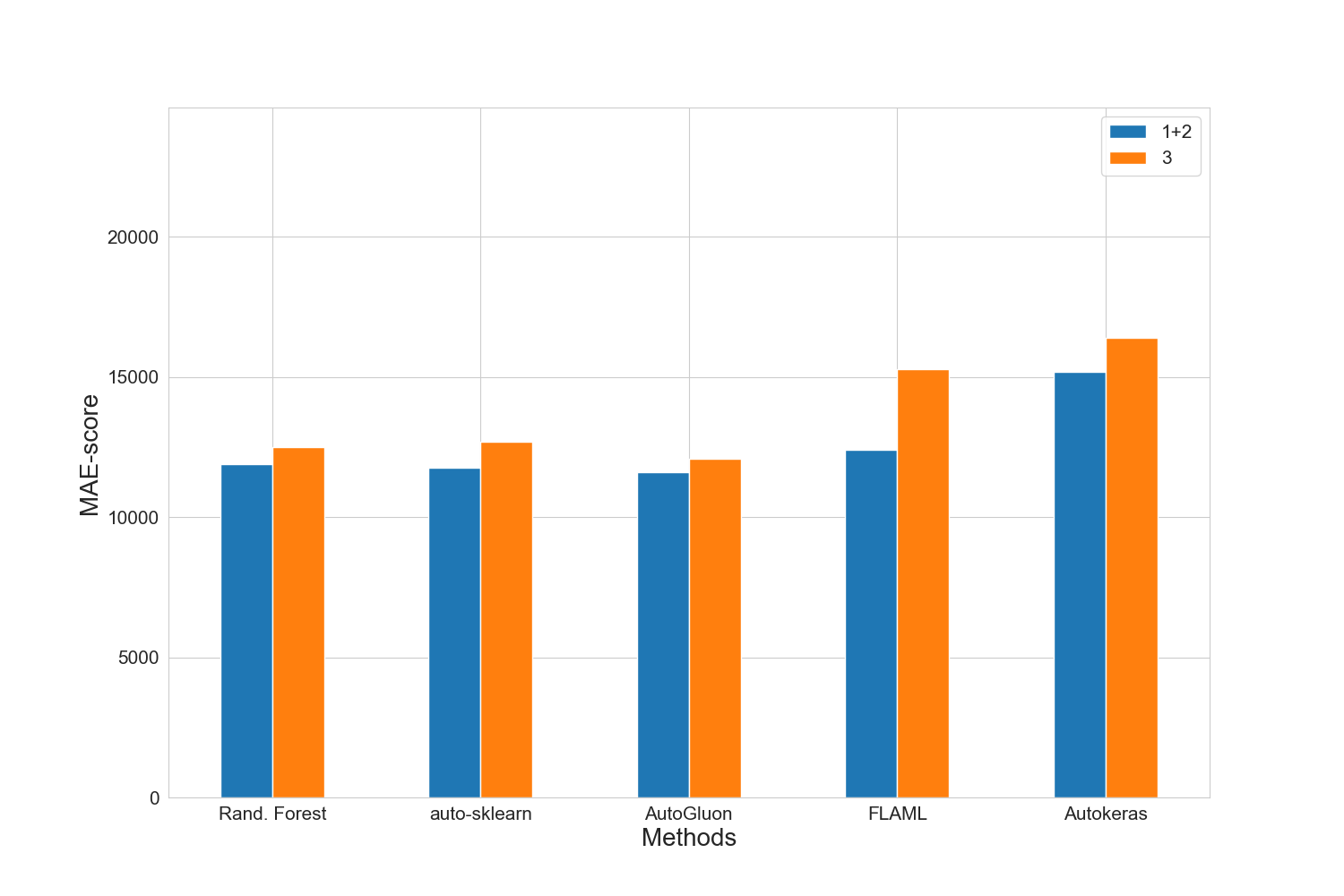
### R2 results for merged-files

|  |  |  |
| --- | --- | --- |
|  | 1+2 | 3 |
| manual | 0.8467 | 0.7925 |
| autosklearn | 0.8514 | 0.7754 |
| autogluon | **0.8559** | 0.8123 |
| flaml | 0.8329 | 0.7155 |
| autokeras | 0.7173 | 0.6495 |



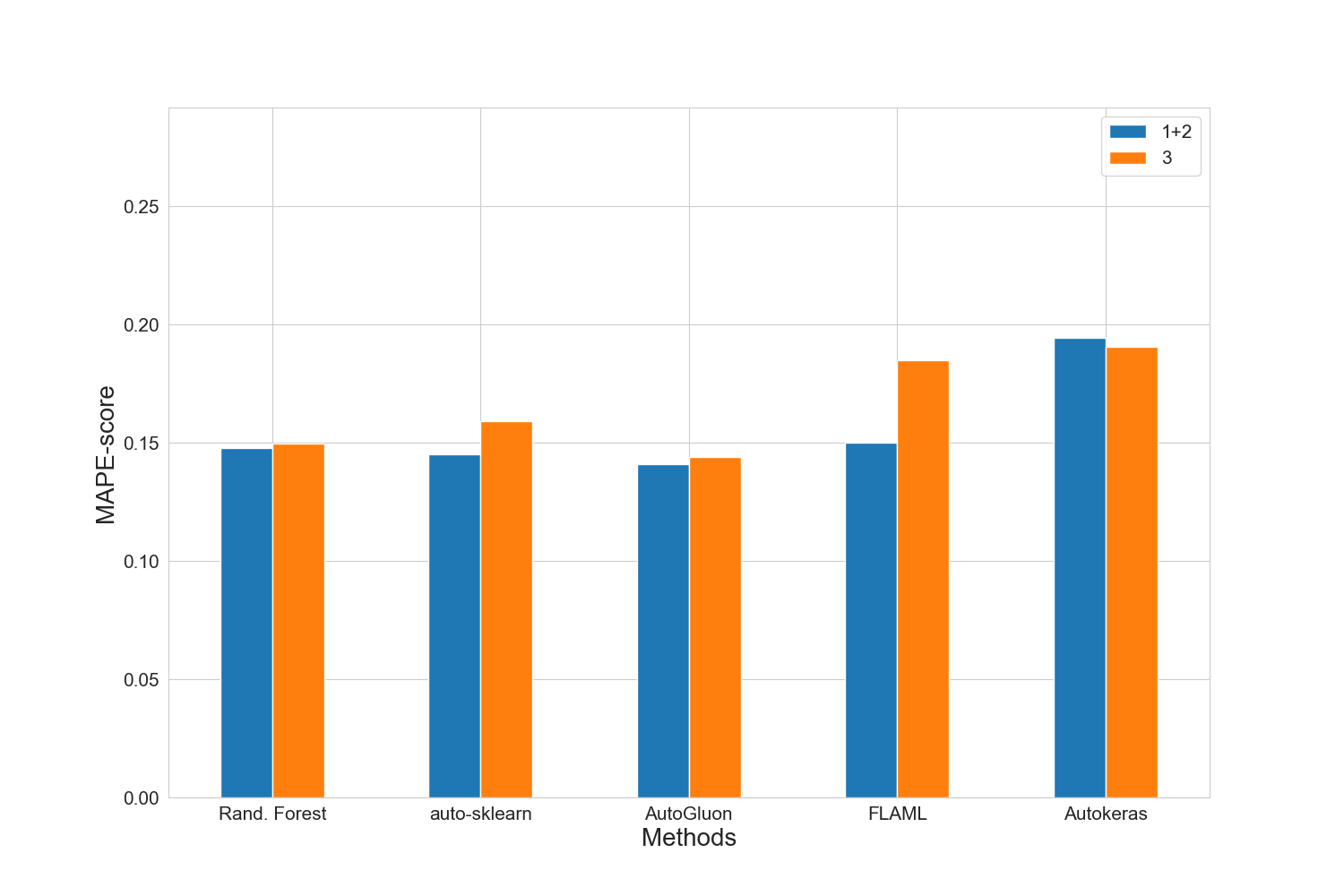
### MAE results for merged-files

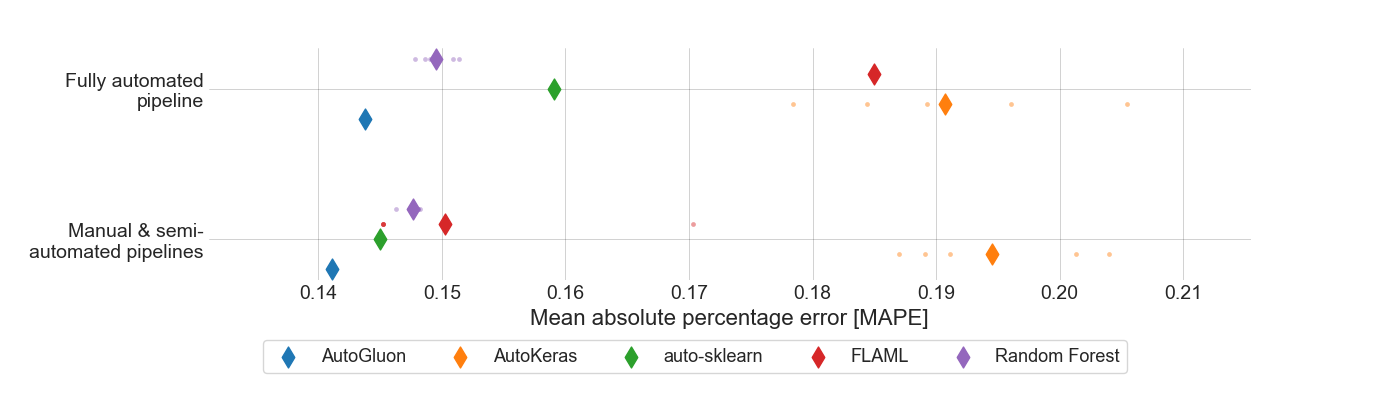
|  |  |  |
| --- | --- | --- |
|  | 1+2 | 3 |
| manual | 11898.6 | 12502.0 |
| autosklearn | 11767.0 | 12690.0 |
| autogluon | **11599.0** | 12082.0 |
| flaml | 12399.4 | 15279.0 |
| autokeras | 15168.8 | 16403.2 |



### MAPE results for merged-files

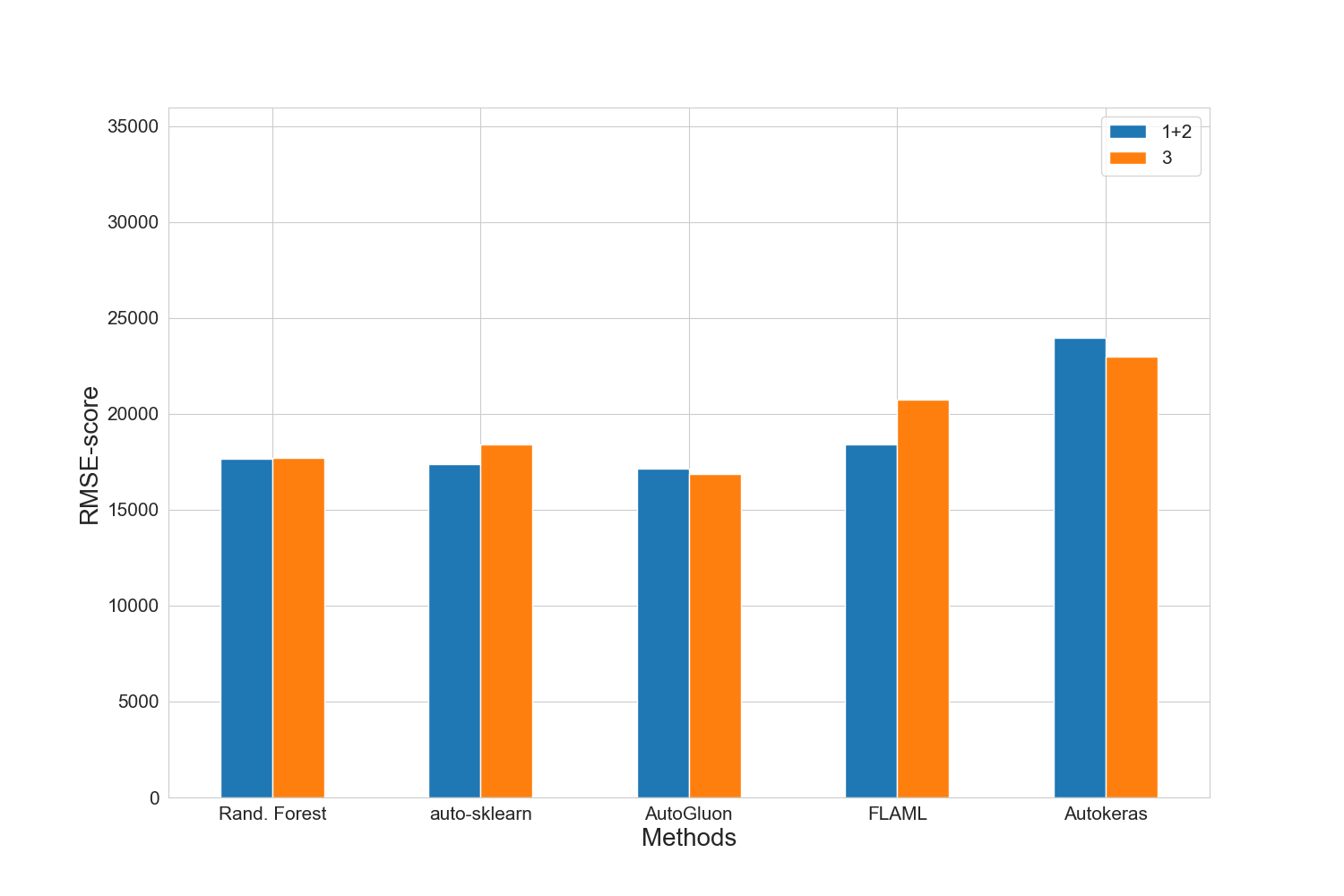
|  |  |  |
| --- | --- | --- |
|  | 1+2 | 3 |
| manual | 0.1477 | 0.1495 |
| autosklearn | 0.145 | 0.1591 |
| autogluon | **0.1411** | 0.1438 |
| flaml | 0.1502 | 0.185 |
| autokeras | 0.1945 | 0.1907 |





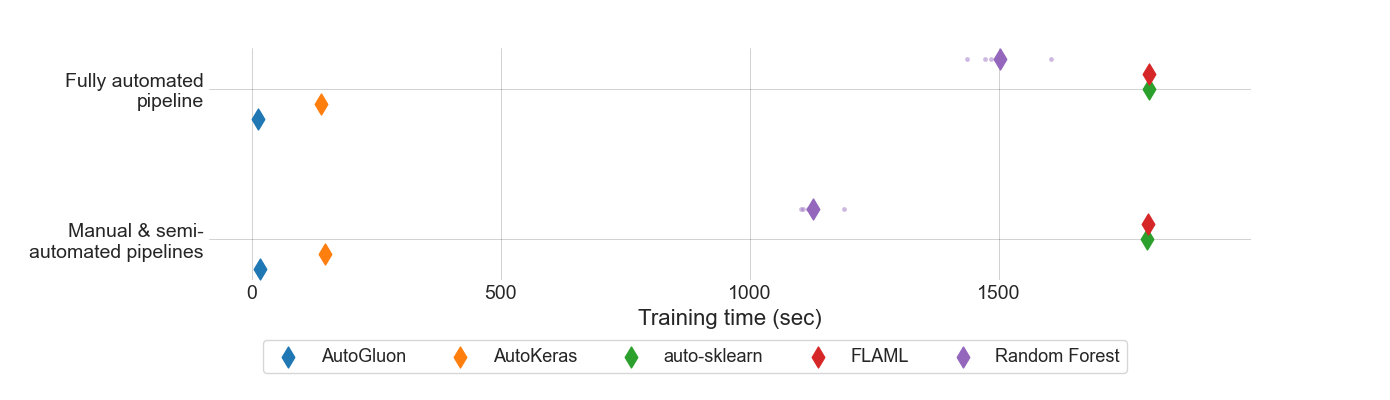
### RMSE results for merged-files

|  |  |  |
| --- | --- | --- |
|  | 1+2 | 3 |
| manual | 17667.4 | 17712.2 |
| autosklearn | 17395.0 | 18425.0 |
| autogluon | 17128.0 | **16846.0** |
| flaml | 18420.6 | 20739.0 |
| autokeras | 23986.4 | 23006.6 |



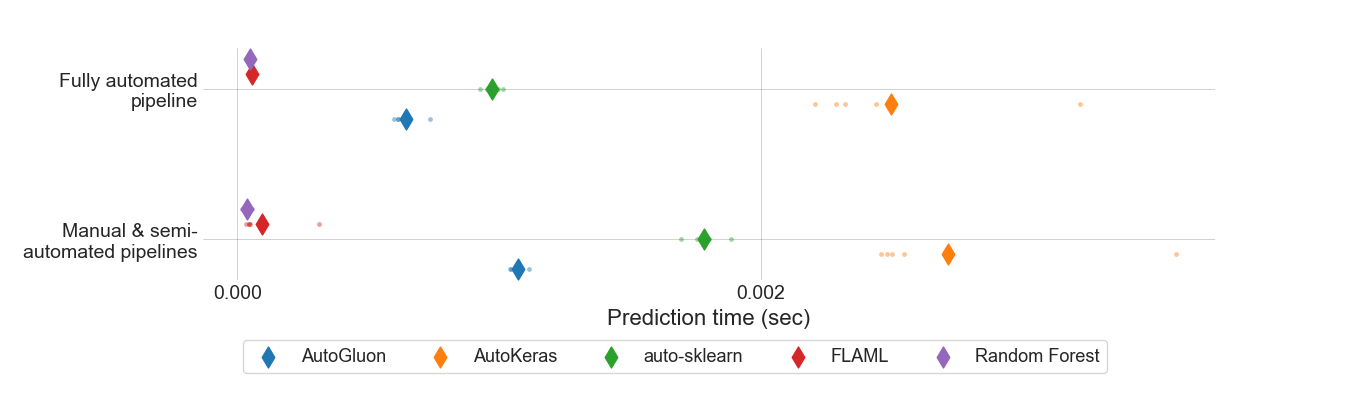
### Training run-time of each method and feature subset in seconds for merged-files

|  |  |  |
| --- | --- | --- |
|  | 1+2 | 3 |
| manual | 1128.0 | 1502.1 |
| autosklearn | 1797.7 | 1801.8 |
| autogluon | 16.4 | 13.7 |
| flaml | 1800.3 | 1802.6 |
| autokeras | 146.8 | 138.8 |



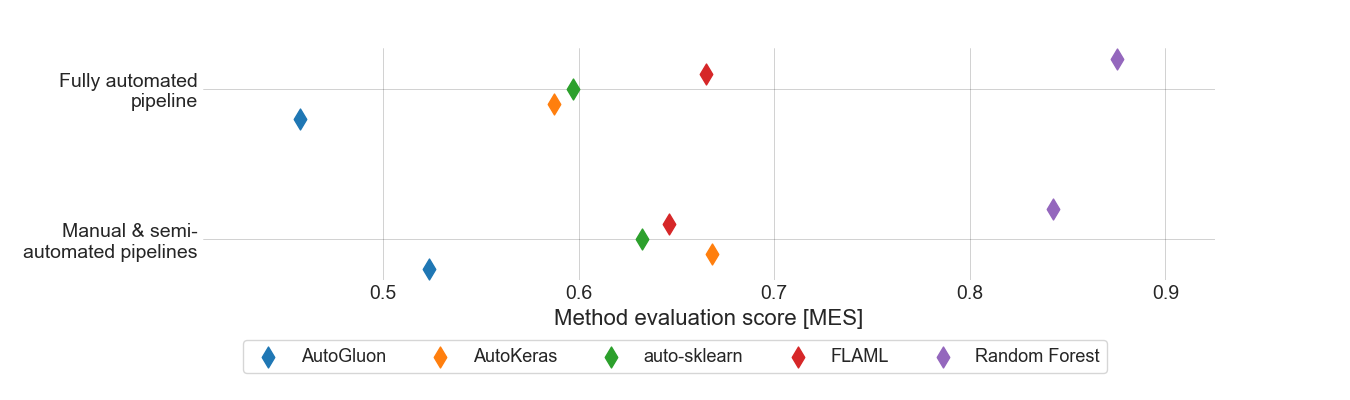
### Prediction time of each method and feature subset in seconds for merged-files

|  |  |  |
| --- | --- | --- |
|  | 1+2 | 3 |
| manual | 3.75731e-05 | 4.79914e-05 |
| autosklearn | 0.0017846589 | 0.0009724629 |
| autogluon | 0.0010737145 | 0.0006434077 |
| flaml | 9.56858e-05 | 5.69708e-05 |
| autokeras | 0.002715391 | 0.0024968074 |



### MEV results for all feature sets.

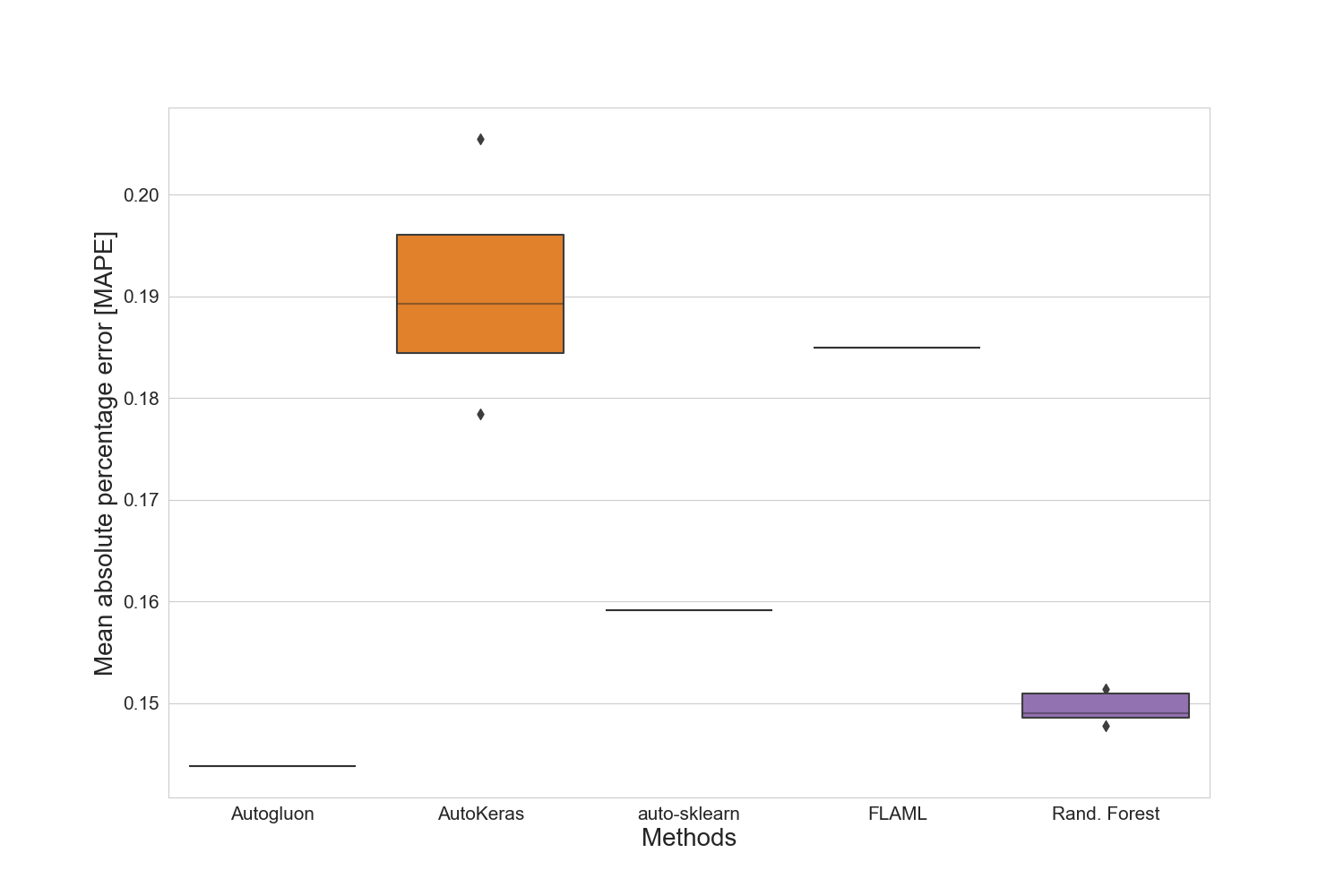
|  |  |  |
| --- | --- | --- |
|  | 1+2 | 3 |
| manual | 0.842348 | 0.875307 |
| autosklearn | 0.632606 | 0.597103 |
| autogluon | 0.523636 | **0.457792** |
| flaml | 0.646118 | 0.665055 |
| autokeras | 0.668154 | 0.5877 |



### Standard deviation for MAPE results for 3 feature set.

|  |  |
| --- | --- |
|  | 3 |
| autogluon | 0.0 |
| autokeras | 0.00939289 |
| autosklearn | 0.0 |
| flaml | 0.0 |
| manual | 0.00137928 |

### Boxplot for MAPE results for 3 feature set.



### Standard deviation for training time for 3 feature set.

|  |  |
| --- | --- |
|  | 3 |
| autogluon | 0.30668068 |
| autokeras | 0.82052261 |
| autosklearn | 3.19066881 |
| flaml | 0.33256783 |
| manual | 56.35259825 |

### Standard deviation for prediction time for 3 feature set.

|  |  |
| --- | --- |
|  | 3 |
| autogluon | 5.0582444e-05 |
| autokeras | 0.000370447692 |
| autosklearn | 3.0998094e-05 |
| flaml | 3.888875e-06 |
| manual | 8.186658e-06 |

### Best manual model for merged-files

|  |
| --- |
| Best manual model |
| RandomForestRegressor(bootstrap=False, max\_features=18, min\_samples\_split=10,  n\_estimators=142) |

### Best results for merged-files

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | R2-Score | MAPE | MAE | RMSE | N-RMSE | IQR-RMSE | CV-RMSE |
| Feature-Set | 1+2 | 1+2 | 1+2 | 3 | 1+2 | 1+2 | 3 |
| Method | autogluon | autogluon | autogluon | autogluon | autogluon | autogluon | autogluon |
| Value | 0.8559 | 0.1411 | 11599.0 | 16846.0 | 0.0646 | 0.2776 | 0.186 |

# Summary of the best results for all data sets

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | # data points | R2-Score | MAPE | MAE | RMSE | N-RMSE | IQR-RMSE | CV-RMSE |
| merged-files | 2804 | **0.8559** | **0.1411** | **11599.0** | **16846.0** | **0.0646** | **0.2776** | **0.186** |

# Statistics for all data sets

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | # data points | Mean | Median | Std. diviation | Max | Min |
| merged-files | 2804 | 90814 | 80148 | 41516 | 261545 | 10000 |