Sarit_CrudeOil

CS

❓ Assistance
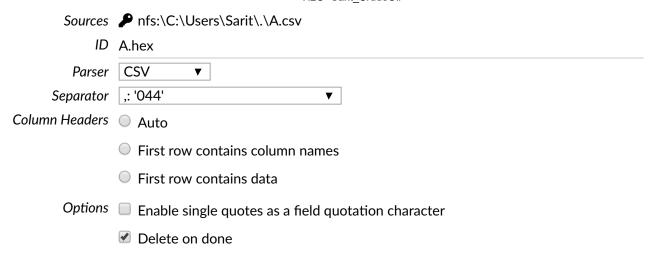
Routine	Description
importFiles	Import file(s) into H_2O
importSqlTable	Import SQL table into H_2O
getFrames	Get a list of frames in H_2O
splitFrame	Split a frame into two or more frames
mergeFrames	Merge two frames into one
getModels	Get a list of models in H_2O
getGrids	Get a list of grid search results in H_2O
getPredictions	Get a list of predictions in H_2O
getJobs	Get a list of jobs running in H_2O
runAutoML	Automatically train and tune many models
buildModel	Build a model
importModel	Import a saved model
predict	Make a prediction

📑 Import Files

Search: .\A.csv 🔍

Search Results: (All files added)

Selected Files: 1 file selected: Clear All

✖ .\A.csv

Actions: ☁ Import

☁ 1 / 1 files imported.

Files 🔑 C:\Users\Sarit\.\A.csv

Actions ⚙ Parse these files...

⚙ Setup Parse

PARSE CONFIGURATION

Sources 🔑 nfs:\C:\Users\Sarit\.\A.csv

ID A.hex

Parser | CSV ▼ |

Separator | ,: '044' ▼ |

Column Headers ⦿ Auto

⦿ First row contains column names

⦿ First row contains data

Options ☐ Enable single quotes as a field quotation character

☑ Delete on done

EDIT COLUMN NAMES AND TYPES

Search by column name...

1	CrudeOilPri	Numeric ▼	25.55	24.91	24.78
2	ma_10	Numeric ▼	0.0	0.0	0.0
3	ma_20	Numeric ▼	0.0	0.0	0.0
4	rsi	Numeric ▼	0.0	0.0	0.0
5	bb_high_ind	Numeric ▼	0.0	0.0	0.0
6	ma_100	Numeric ▼	0.0	0.0	0.0
7	26_ema	Numeric ▼	25.55	25.217692307692307	25.0604337118
8	12_ema	Numeric ▼	25.55	25.20333333333333	25.0381062355
9	macd	Numeric ▼	0.0	-0.01435897435897715	-0.0223274756
10	bb_low_indi	Numeric ▼	0.0	0.0	0.0
11	CCI	Numeric ▼	156.614458694477	156.614458694477	156.6144586944
12	std_20	Numeric ▼	0.0	0.0	0.0
13	std_100	Numeric ▼	0.0	0.0	0.0
14	Index	Numeric ▼	1411.75	1413.5	1404.0

← Previous page   → Next page

≔ Parse

≔ Job

Run Time 00:00:03.254

Remaining Time 00:00:00.0

Type Frame

Key 🔍 A.hex

Description Parse

Status DONE

Progress 100%

Done.

Actions (🔍 View)

⊞ A.hex

Actions: (▦ View Data) (✂ Split...) (⬡ Build Model...) (⚡ Predict) (☁ Download) (🗑 Delete)
(🖫 Export)

Rows	Columns	Compressed Size
5019	14	443KB

▾ COLUMN SUMMARIES

label	type	Missing	Zeros	+Inf	−Inf	min	max	mean	sigma
CrudeOilPrice	real	0	0	0	0	17.4500	145.2900	61.9786	26.3827
ma_10	real	0	9	0	0	0	142.0490	61.9067	26.4331
ma_20	real	0	19	0	0	0	139.5300	61.8246	26.4975
rsi	real	0	14	0	0	0	80.7686	51.0950	12.3874
bb_high_indicator	int	0	4775	0	0	0	1.0	0.0486	0.2151
ma_100	real	0	99	0	0	0	126.0110	61.1384	26.8801
26_ema	real	0	0	0	0	19.3583	138.0545	61.9059	26.1997
12_ema	real	0	0	0	0	18.7529	141.1385	61.9464	26.3061
macd	real	0	1	0	0	−9.8296	4.7026	0.0405	1.6332
bb_low_indicator	int	0	4776	0	0	0	1.0	0.0484	0.2147
CCI	real	0	0	0	0	−195.9657	156.6145	0.3892	66.9569
std_20	real	0	19	0	0	0	13.8067	2.1216	1.3258
std_100	real	0	99	0	0	0	27.8069	4.7927	3.7863
Index	real	0	0	0	0	676.0	3024.5000	1557.8188	559.6673

(← Previous 20 Columns) (→ Next 20 Columns)

▸ CHUNK COMPRESSION SUMMARY

▸ FRAME DISTRIBUTION SUMMARY

✂ Split Frame

Frame: [A.hex ▾]

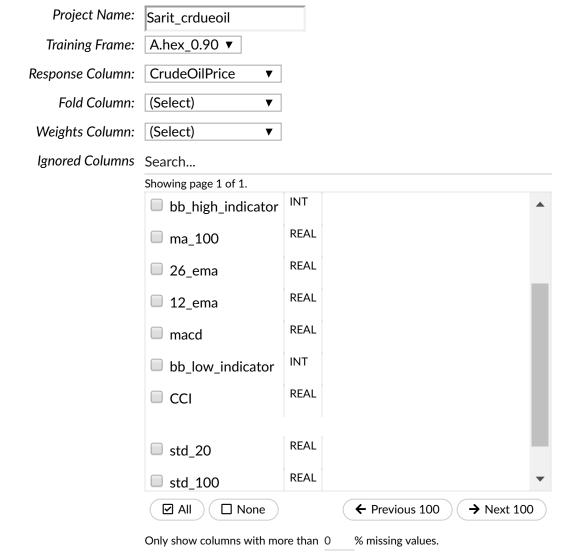Splits: *Ratio*   *Key*

    0.90   A.hex_0.90   ✖

    0.10   A.hex_0.10

    Add a new split

Seed: 982869

    ✖ Create

⊞ Split Frames

Type	Key	Ratio
⊞	A.hex_0.90	0.9
⊞	A.hex_0.10	0.0999999999999998

⊹ Run AutoML

Project Name: Sarit_crdueoil

Training Frame: A.hex_0.90 ▾

Response Column: CrudeOilPrice   ▾

Fold Column: (Select)   ▾

Weights Column: (Select)   ▾

Ignored Columns   Search…

Showing page 1 of 1.

☐ bb_high_indicator	INT	▲
☐ ma_100	REAL	
☐ 26_ema	REAL	
☐ 12_ema	REAL	
☐ macd	REAL	
☐ bb_low_indicator	INT	
☐ CCI	REAL	
☐ std_20	REAL	
☐ std_100	REAL	▼

☑ All   ☐ None   ← Previous 100   → Next 100

Only show columns with more than 0   % missing values.

Validation Frame:	A.hex_0.10 ▾
Blending Frame:	(Select) ▾
Leaderboard Frame:	(Select) ▾
Balance classes:	☐

Exclude these algorithms

- ☑ GLM
- ☑ DRF
- ☐ GBM
- ☑ XGBoost
- ☐ DeepLearning
- ☐ StackedEnsemble

Max models to build:	
Max Run Time (sec):	3600
Max Run Time Per Model (sec):	0
Early stopping metric:	AUTO ▾
Leaderboard sort metric:	AUTO ▾
Early stopping rounds:	3
Early stopping tolerance:	
nfolds:	5
Keep cross-validation predictions	☑
Keep cross-validation models	☑
Keep cross-validation fold assignment	☐
Seed:	-1
Checkpoints path:	

⬡ Build Model

☵ Job

Run Time	01:08:11.818
Remaining Time	00:00:00.0
Type	Auto Model
Key	🔍 Sarit_crdueoil

	Description	AutoML build
	Status	DONE
	Progress	100%

Done.

Actions   🔍 View

⠿ Leaderboard

⟳ Monitor Live

▾ M O D E L S

models sorted in order of mean_residual_deviance, best first

	model_id	mean_residual_deviance	rmse
0	GBM_2_AutoML_20190828_150015	0.3443552196160738	0.58681
1	GBM_3_AutoML_20190828_150015	0.35898515481659066	0.59915
2	GBM_1_AutoML_20190828_150015	0.36444658821339737	0.60369
3	GBM_grid_1_AutoML_20190828_150015_model_15	0.37427913967726895	0.61178
4	GBM_grid_1_AutoML_20190828_150015_model_9	0.4049848096578199	0.63638
5	GBM_4_AutoML_20190828_150015	0.4123515018812789	0.64214
6	GBM_grid_1_AutoML_20190828_150015_model_12	0.4293805302018526	0.65527
7	StackedEnsemble_BestOfFamily_AutoML_20190828_150015	0.5590797550846337	0.74771
8	GBM_grid_1_AutoML_20190828_150015_model_10	0.5918462378517534	0.76931
9	GBM_grid_1_AutoML_20190828_150015_model_5	0.6451319437142952	0.80320
10	GBM_grid_1_AutoML_20190828_150015_model_1	0.7112514963742391	0.84335
11	GBM_5_AutoML_20190828_150015	0.7645012694465366	0.87435
12	GBM_grid_1_AutoML_20190828_150015_model_11	0.7876871720268033	0.88751
13	GBM_grid_1_AutoML_20190828_150015_model_13	0.8597674666003462	0.92723
14	GBM_grid_1_AutoML_20190828_150015_model_4	0.994298732602626	0.99714
15	GBM_grid_1_AutoML_20190828_150015_model_6	1.005825067254998	1.00290
16	GBM_grid_1_AutoML_20190828_150015_model_8	1.7583617724013856	1.32603
17	GBM_grid_1_AutoML_20190828_150015_model_3	2.0552617076114146	1.43361
18	DeepLearning_1_AutoML_20190828_150015	2.6010547865252414	1.61277
19	GBM_grid_1_AutoML_20190828_150015_model_14	3.4528607778274867	1.85818
20	GBM_grid_1_AutoML_20190828_150015_model_2	4.564195690941032	2.13639
21	DeepLearning_grid_1_AutoML_20190828_150015_model_1	7.327946370229572	2.70701
22	DeepLearning_grid_1_AutoML_20190828_150015_model_2	12.067341165877572	3.47380

▾ E V E N T   L O G

Actions taken and discoveries made by AutoML

	timestamp	level	stage	message	name	val
0	15:00:15.249	Info	Workflow	Project: Sarit_crdueoil		
1	15:00:15.250	Info	Workflow	AutoML job created: 2019.08.28 15:00:15.238	creation_epoch	156

	timestamp	level	stage	message	name	val
2	15:00:15.254	Info	ModelTraining	Disabling Algo: GLM as requested by the user.		
3	15:00:15.254	Info	ModelTraining	Disabling Algo: DRF as requested by the user.		
4	15:00:15.254	Info	ModelTraining	Disabling Algo: XGBoost as requested by the user.		
5	15:00:15.254	Info	Workflow	Build control seed: -1 (random)		
6	15:00:15.256	Info	DataImport	training frame: Frame key: automl_training_A.hex_0.90 cols: 14 rows: 4512 chunks: 32 size: 411049 checksum: 6707049142222399112		
7	15:00:15.256	Info	DataImport	validation frame: Frame key: A.hex_0.10 cols: 14 rows: 507 chunks: 32 size: 74737 checksum: -3316483520834033166		
8	15:00:15.257	Info	DataImport	leaderboard frame: NULL		
9	15:00:15.257	Info	DataImport	response column: CrudeOilPrice		

📦 Model

Model ID: StackedEnsemble_BestOfFamily_AutoML_20190828_150015

Algorithm: Stacked Ensemble

Actions: (🔄 Refresh) (⚡ Predict...) (⬇ Download POJO)

(⬇ Download Model Deployment Package (MOJO)) (💾 Export) (☰ Inspect) (🗑 Delete)

(⬇ Download Gen Model)

▾ MODEL PARAMETERS

(⌄ Show all parameters)

Parameter	Value	Description
model_id	StackedEnsemble_BestOfFamily_AutoML_20190828_150015	Destination id for this model; auto-generated if not specified.
training_frame	automl_training_A.hex_0.90	Id of the training data frame.
response_column	CrudeOilPrice	Response variable column.
validation_frame	A.hex_0.10	Id of the validation data frame.

Parameter	Value	Description
base_models	GBM_2_AutoML_20190828_150015, DeepLearning_1_AutoML_20190828_150015	List of models (or model ids) to ensemble/stack together. If not using blending frame, then models must have been cross-validated using nfolds > 1, and folds must be identical across models.
metalearner_nfolds	5	Number of folds for K-fold cross-validation of the metalearner algorithm (0 to disable or >= 2).
seed	2301155008789949514	Seed for random numbers; passed through to the metalearner algorithm. Defaults to -1 (time-based random number)
keep_levelone_frame	true	Keep level one frame used for metalearner training.
export_checkpoints_dir		Automatically export generated models to this directory.

▾ O U T P U T

cross_validation_models	·
cross_validation_predictions	·
cross_validation_holdout_predictions_frame_id	·
cross_validation_fold_assignment_frame_id	·
model_category	Regression
model_summary	·
scoring_history	·
cross_validation_metrics_summary	·
status	·
start_time	1566978654744
end_time	1566978656539
run_time	1795
metalearner	metalearner_AUTO_StackedEnsemble_BestOfFamily_A
levelone_frame_id	levelone_training_StackedEnsemble_BestOfFamily_
stacking_strategy	cross_validation

▼ N A M E S

names

ma_10

ma_20

rsi

bb_high_indicator

ma_100

26_ema

12_ema

macd

bb_low_indicator

CCI

std_20

std_100

Index

CrudeOilPrice

▸ C O L U M N _ T Y P E S

▸ D O M A I N S

▼ O U T P U T - T R A I N I N G _ M E T R I C S

model	StackedEnsemble_BestOfFamily_AutoML_20190828_150015
model_checksum	-272794712211980384
frame	automl_training_A.hex_0.90
frame_checksum	6707049142222399112
description	·
model_category	Regression
scoring_time	1566978656527
predictions	·
MSE	0.302524
RMSE	0.550022
nobs	4512
custom_metric_name	·
custom_metric_value	0
r2	0.999562
mean_residual_deviance	0.302524
mae	0.426641
rmsle	0.010625
residual_deviance	1364.988169
null_deviance	3117239.946350
AIC	7417.977800
null_degrees_of_freedom	4511
residual_degrees_of_freedom	4509

▼ OUTPUT - VALIDATION_METRICS

model	metalearner_AUTO_StackedEnsemble_BestOfFamily_AutoML_20190828_150
model_checksum	-3787657792369670144
frame	·
frame_checksum	0
description	·
model_category	Regression
scoring_time	1566978656331
predictions	·
MSE	0.546893
RMSE	0.739522
nobs	507
custom_metric_name	·
custom_metric_value	0
r2	0.999262
mean_residual_deviance	0.546893
mae	0.531400
rmsle	0.013358
residual_deviance	277.274592
null_deviance	375510.404289
AIC	1140.827813
null_degrees_of_freedom	506
residual_degrees_of_freedom	504

▾ OUTPUT - CROSS_VALIDATION_METRICS

model	StackedEnsemble_BestOfFamily_AutoML_20190828_150015
model_checksum	-272794712211980384
frame	levelone_training_StackedEnsemble_BestOfFamily_AutoML_20190828_15
frame_checksum	732130319272829500
description	5-fold cross-validation on training data (Metrics computed for combined holdout predictions)
model_category	Regression
scoring_time	1566978656343
predictions	·
MSE	0.559080
RMSE	0.747716
nobs	4512
custom_metric_name	·
custom_metric_value	0
r2	0.999191
mean_residual_deviance	0.559080
mae	0.502105
rmsle	0.014454
residual_deviance	2522.567855
null_deviance	3117518.318849
AIC	10188.939629
null_degrees_of_freedom	4511
residual_degrees_of_freedom	4509

▾ OUTPUT - HELP

cross_validation_metrics	Cross-validation model metrics
cross_validation_metrics_summary	Cross-validation model metrics summary
start_time	Start time in milliseconds
run_time	Runtime in milliseconds
status	Job status
levelone_frame_id	Level one frame used for metalearner training.
domains	Domains for categorical columns
model_category	Category of the model (e.g., Binomial)
__meta	Metadata on this schema instance, to make it self-describing.
model_summary	Model summary
scoring_history	Scoring history
help	Help information for output fields
end_time	End time in milliseconds
names	Column names
stacking_strategy	The stacking strategy used for training.
column_types	Column types
metalearner	Model which combines the base_models into a stacked ensemble.
cross_validation_fold_assignment_frame_id	Cross-validation fold assignment (each row is assigned to one holdout fold)
cross_validation_models	Cross-validation models (model ids)
training_metrics	Training data model metrics
cross_validation_predictions	Cross-validation predictions, one per cv model (deprecated, use