Sarit_SilverPrice

❷ 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:	.\C.csv 🔍
Search Results:	(All files added)
Selected Files:	1 file selected: Clear All

> ✖ .\C.csv

Actions:	☁ Import

☁ 1 / 1 files imported.
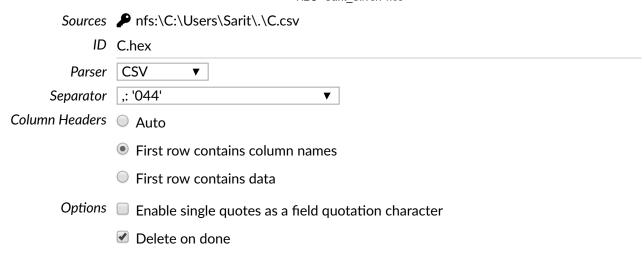
Files	🔑 C:\Users\Sarit\.\C.csv
Actions	⚙ Parse these files...

⚙ Setup Parse

PARSE CONFIGURATION

Sources	🔑 nfs:\C:\Users\Sarit\.\C.csv			
ID	C.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...

#	Name	Type			
1	SilverPrice	Numeric ▼	5.335	5.17	5.127
2	ma_20	Numeric ▼	0.0	0.0	0.0
3	ma_100	Numeric ▼	0.0	0.0	0.0
4	std_20	Numeric ▼	0.0	0.0	0.0
5	std_100	Numeric ▼	0.0	0.0	0.0
6	rsi	Numeric ▼	0.0	0.0	0.0
7	bb_high_ind	Numeric ▼	0.0	0.0	0.0
8	bb_low_indi	Numeric ▼	0.0	0.0	0.0
9	26_ema	Numeric ▼	5.335	5.249326923076922	5.2053760473
10	12_ema	Numeric ▼	5.335	5.245624999999995	5.1993256351(
11	macd	Numeric ▼	0.0	-0.003701923076922853	-0.006050412;
12	CCI	Numeric ▼	37.73927870320445	37.73927870320445	37.7392787032
13	Index	Numeric ▼	1411.75	1413.5	1404.0

(← Previous page) (→ Next page)

(⁝≣ Parse)

⁝≣ Job

Run Time	00:00:13.14
Remaining Time	00:00:00.0
Type	Frame
Key	🔍 C.hex
Description	Parse
Status	DONE

Progress 100%

Done.

Actions (🔍 View)

⊞ C.hex

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

Rows	Columns	Compressed Size
5019	13	402KB

▾ COLUMN SUMMARIES

label	type	Missing	Zeros	+Inf	-Inf	min	max	mean	sigma
SilverPrice	real	0	0	0	0	4.0260	48.5840	14.9349	8.5601
ma_20	real	0	19	0	0	0	43.2183	14.8932	8.5705
ma_100	real	0	99	0	0	0	38.7589	14.7292	8.6387
std_20	real	0	19	0	0	0	5.4728	0.4821	0.5203
std_100	real	0	99	0	0	0	5.6914	1.0344	1.0018
rsi	real	0	14	0	0	0	93.2382	50.8860	12.7801
bb_high_indicator	int	0	4707	0	0	0	1.0	0.0622	0.2415
bb_low_indicator	int	0	4792	0	0	0	1.0	0.0452	0.2078
26_ema	real	0	0	0	0	4.1303	42.4165	14.9068	8.5222
12_ema	real	0	0	0	0	4.0710	45.1266	14.9221	8.5412
macd	real	0	1	0	0	-2.8630	2.8438	0.0153	0.4086
CCI	real	0	0	0	0	-71.4697	37.7393	0.1054	21.6569
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: [C.hex ▾]

Splits:

Ratio	Key	
0.90	C.hex_0.90	✖
0.10	C.hex_0.10	

Add a new split
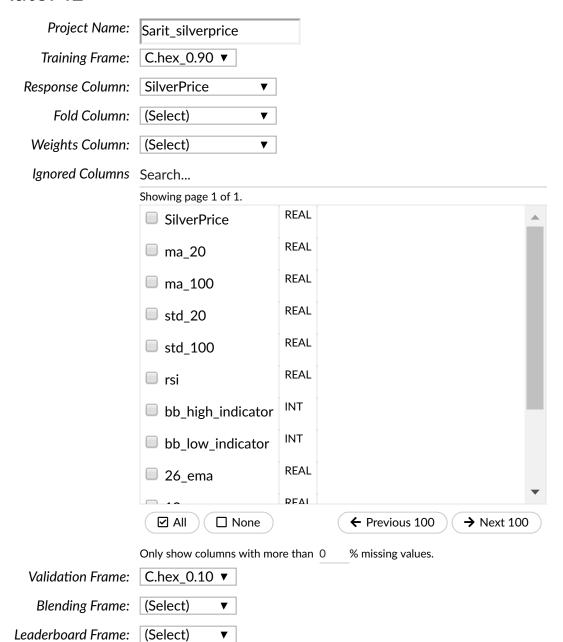
Seed: 192783

⚔ Create

⊞ Split Frames

Type	Key	Ratio
⊞	C.hex_0.90	0.9
⊞	C.hex_0.10	0.09999999999999998

⛓ Run AutoML

Project Name: Sarit_silverprice

Training Frame: C.hex_0.90 ▾

Response Column: SilverPrice ▾

Fold Column: (Select) ▾

Weights Column: (Select) ▾

Ignored Columns Search...

Showing page 1 of 1.

☐ SilverPrice	REAL
☐ ma_20	REAL
☐ ma_100	REAL
☐ std_20	REAL
☐ std_100	REAL
☐ rsi	REAL
☐ bb_high_indicator	INT
☐ bb_low_indicator	INT
☐ 26_ema	REAL
	REAL

☑ All   ☐ None   ← Previous 100   → Next 100

Only show columns with more than [0] % missing values.

Validation Frame: C.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   00:58:07.42

Remaining Time 00:00:00.0

Type   Auto Model

Key   🔍 Sarit_silverprice

Description   AutoML build

Status   DONE

Progress   100%

Done.
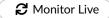
Actions　　◯ 🔍 View

✇ Leaderboard

⟳ Monitor Live

▾ M O D E L S

models sorted in order of mean_residual_deviance, best first

9	GBM_grid_1_AutoML_20190828_220224_model_25	0.030156665951345266	0.17385
10	GBM_4_AutoML_20190828_220224	0.03060649111355642	0.17494
11	GBM_grid_1_AutoML_20190828_220224_model_4	0.03217029365948956	0.17936
12	GBM_2_AutoML_20190828_220224	0.032971388493223674	0.18158
13	GBM_grid_1_AutoML_20190828_220224_model_24	0.03516135600518364	0.18751
14	GBM_grid_1_AutoML_20190828_220224_model_8	0.03565270538131175	0.18881
15	GBM_grid_1_AutoML_20190828_220224_model_20	0.03996018107901072	0.19990
16	GBM_grid_1_AutoML_20190828_220224_model_33	0.04020975626944585	0.20052
17	GBM_grid_1_AutoML_20190828_220224_model_18	0.045322455403672	0.21289
18	GBM_grid_1_AutoML_20190828_220224_model_5	0.0472552133109312	0.21738
19	GBM_grid_1_AutoML_20190828_220224_model_34	0.051231183572182426	0.22634
20	GBM_grid_1_AutoML_20190828_220224_model_12	0.0571942459516962	0.23915
21	GBM_grid_1_AutoML_20190828_220224_model_15	0.06381854136895918	0.25262
22	GBM_grid_1_AutoML_20190828_220224_model_6	0.06529849270575137	0.25553
23	GBM_grid_1_AutoML_20190828_220224_model_1	0.07236242977581726	0.26900
24	GBM_grid_1_AutoML_20190828_220224_model_14	0.07960474517000846	0.28214
25	GBM_grid_1_AutoML_20190828_220224_model_19	0.0796308841776027	0.28218
26	GBM_grid_1_AutoML_20190828_220224_model_10	0.0842701136875369	0.29029
27	DeepLearning_grid_1_AutoML_20190828_220224_model_1	0.09213313665941414	0.30353
28	GBM_grid_1_AutoML_20190828_220224_model_22	0.09503255584109677	0.30827
29	GBM_grid_1_AutoML_20190828_220224_model_9	0.0951833623202756	0.30851
30	GBM_5_AutoML_20190828_220224	0.1034433193008055	0.32162
31	GBM_grid_1_AutoML_20190828_220224_model_32	0.1041723250663814	0.32275
32	GBM_grid_1_AutoML_20190828_220224_model_27	0.105740150280458959	0.32517
33	GBM_grid_1_AutoML_20190828_220224_model_17	0.11222572487784138	0.33500

▾ E V E N T   L O G

Actions taken and discoveries made by AutoML

27	22:04:30.338	Info	ModelTraining	AutoML: starting GBM hyperparameter search
28	22:04:49.761	Debug	ModelTraining	GBM hyperparameter search started
29	22:05:16.431	Debug	ModelTraining	Built: 1 models for search: GBM hyperparameter search
30	22:05:30.37	Debug	ModelTraining	Built: 2 models for search: GBM hyperparameter search
31	22:05:34.883	Debug	ModelTraining	Built: 3 models for search: GBM hyperparameter search
32	22:05:34.905	Info	ModelTraining	New leader: GBM_grid_1_AutoML_20190828_220224_model_3, mean_residual_deviance: 0.02642007400184025
				Built: 4 models for search: GBM hyperparameter

33	22:09:31.155	Debug	ModelTraining	Built: 4 models for search: GBM hyperparameter search
34	22:09:39.186	Debug	ModelTraining	Built: 5 models for search: GBM hyperparameter search
35	22:10:02.390	Debug	ModelTraining	Built: 6 models for search: GBM hyperparameter search
36	22:10:18.596	Debug	ModelTraining	Built: 7 models for search: GBM hyperparameter search
37	22:10:35.617	Debug	ModelTraining	Built: 8 models for search: GBM hyperparameter search
38	22:10:38.871	Debug	ModelTraining	Built: 9 models for search: GBM hyperparameter search
39	22:10:41.885	Debug	ModelTraining	Built: 10 models for search: GBM hyperparameter search

📦 Model

Model ID: StackedEnsemble_BestOfFamily_AutoML_20190828_220224

Algorithm: Stacked Ensemble

Actions: ⟳ Refresh ⚡ Predict... ⬇ Download POJO
⬇ Download Model Deployment Package (MOJO) 💾 Export ☰ Inspect 🗑 Delete
⬇ Download Gen Model

▾ M O D E L   P A R A M E T E R S

⨠ Show all parameters

Parameter	Value	Description
model_id	StackedEnsemble_BestOfFamily_AutoML_20190828_220224	Destination id for this model; auto-generated if not specified.
training_frame	automl_training_C.hex_0.90	Id of the training data frame.
response_column	SilverPrice	Response variable column.
validation_frame	C.hex_0.10	Id of the validation data frame.

Parameter	Value	Description
base_models	GBM_grid_1_AutoML_20190828_220224_model_23, DeepLearning_grid_1_AutoML_20190828_220224_model_1	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	314170741428538015	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

▸ N A M E S

▸ 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_220224
model_checksum	-3627774477104285880
frame	automl_training_C.hex_0.90
frame_checksum	-172112169109802332
description	·
model_category	Regression
scoring_time	1567004399772
predictions	·
MSE	0.005189
RMSE	0.072032
nobs	4500
custom_metric_name	·
custom_metric_value	0
r2	0.999929
mean_residual_deviance	0.005189
mae	0.047168
rmsle	0.003822
residual_deviance	23.348845
null_deviance	327722.816871
AIC	-10897.336402
null_degrees_of_freedom	4499
residual_degrees_of_freedom	4497

▾ O U T P U T - V A L I D A T I O N _ M E T R I C S

model	metalearner_AUTO_StackedEnsemble_BestOfFamily_AutoML_20190828_220
model_checksum	-4550748276153166540
frame	·
frame_checksum	0
description	·
model_category	Regression
scoring_time	1567004397859
predictions	·
MSE	0.036549
RMSE	0.191178
nobs	519
custom_metric_name	·
custom_metric_value	0
r2	0.999525
mean_residual_deviance	0.036549
mae	0.081853
rmsle	0.007347
residual_deviance	18.968916
null_deviance	39981.135716
AIC	-236.565872
null_degrees_of_freedom	518
residual_degrees_of_freedom	516

▾ OUTPUT - CROSS_VALIDATION_METRICS

model	StackedEnsemble_BestOfFamily_AutoML_20190828_220224
model_checksum	-3627774477104285880
frame	levelone_training_StackedEnsemble_BestOfFamily_AutoML_20190828_22
frame_checksum	-7586191322408837304
description	5-fold cross-validation on training data (Metrics computed for combined holdout predictions)
model_category	Regression
scoring_time	1567004397867
predictions	·
MSE	0.025744
RMSE	0.160450
nobs	4500
custom_metric_name	·
custom_metric_value	0
r2	0.999647
mean_residual_deviance	0.025744
mae	0.097674
rmsle	0.008886
residual_deviance	115.848248
null_deviance	327892.962424
AIC	-3689.535175
null_degrees_of_freedom	4499
residual_degrees_of_freedom	4497

📦 Model
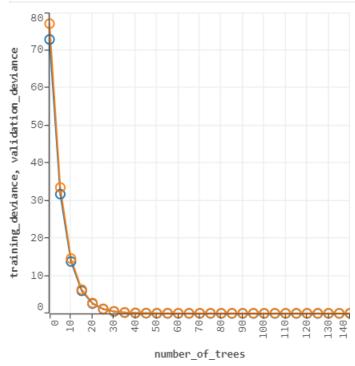
Model ID:　GBM_grid_1_AutoML_20190828_220224_model_23

Algorithm:　Gradient Boosting Machine
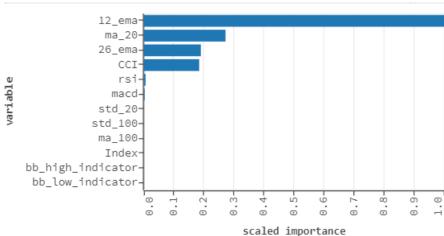
Actions:　　[🔁 Refresh]　[⚡ Predict...]　[⬇ Download POJO]
　　　　　　　[⬇ Download Model Deployment Package (MOJO)]　[💾 Export]　[☰ Inspect]　[🗑 Delete]
　　　　　　　[⬇ Download Gen Model]

▸ MODEL PARAMETERS

▾ SCORING HISTORY - DEVIANCE

▾ VARIABLE IMPORTANCES

▸ OUTPUT

▸ COLUMN_TYPES

▸ CROSS_VALIDATION_MODELS

▸ CROSS_VALIDATION_PREDICTIONS

▸ OUTPUT - MODEL SUMMARY

▸ OUTPUT - SCORING HISTORY

▸ OUTPUT - TRAINING_METRICS

▸ OUTPUT - VALIDATION_METRICS

▸ OUTPUT - CROSS_VALIDATION_METRICS

▸ OUTPUT - CROSS-VALIDATION METRICS SUMMARY

▾ OUTPUT - VARIABLE IMPORTANCES

variable	relative_importance	scaled_importance	percentage
12_ema	1186140.5000	1.0	0.6042
ma_20	321994.0	0.2715	0.1640
26_ema	224822.2969	0.1895	0.1145
CCI	218288.5938	0.1840	0.1112
rsi	6532.2378	0.0055	0.0033
macd	3402.1230	0.0029	0.0017
std_20	538.5157	0.0005	0.0003
std_100	445.0909	0.0004	0.0002
ma_100	419.4277	0.0004	0.0002
Index	340.5550	0.0003	0.0002
bb_high_indicator	120.9876	0.0001	0.0001
bb_low_indicator	109.4044	0.0001	0.0001

▾ PREVIEW POJO

</> Preview POJO

📦 Model

Model ID: GBM_1_AutoML_20190828_220224

Algorithm: Gradient Boosting Machine
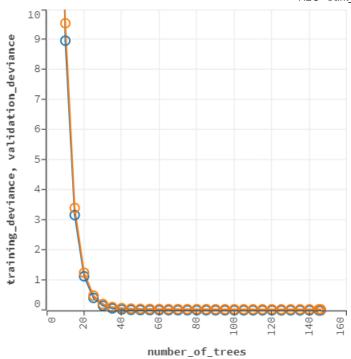
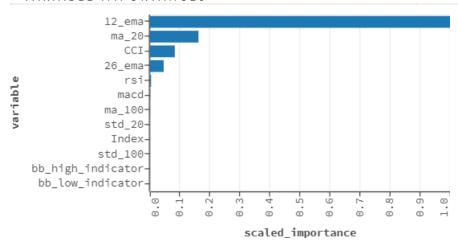*Actions:* ⟳ Refresh ⚡ Predict... ⬇ Download POJO

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

⬇ Download Gen Model

▸ MODEL PARAMETERS

▾ SCORING HISTORY - DEVIANCE

▾ VARIABLE IMPORTANCES
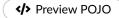

▸ OUTPUT

▸ COLUMN_TYPES

▸ CROSS_VALIDATION_MODELS

▸ CROSS_VALIDATION_PREDICTIONS

▸ OUTPUT - MODEL SUMMARY

▸ OUTPUT - SCORING HISTORY

▸ OUTPUT - TRAINING_METRICS

▸ OUTPUT - VALIDATION_METRICS

▸ OUTPUT - CROSS_VALIDATION_METRICS

▸ OUTPUT - CROSS-VALIDATION METRICS SUMMARY

▾ OUTPUT - VARIABLE IMPORTANCES

variable	relative_importance	scaled_importance	percentage
12_ema	1219411.7500	1.0	0.7700
ma_20	197258.1563	0.1618	0.1246
CCI	101263.1797	0.0830	0.0639
26_ema	56027.5117	0.0459	0.0354
rsi	4978.3955	0.0041	0.0031
macd	2171.6887	0.0018	0.0014
ma_100	1365.4365	0.0011	0.0009
std_20	335.0648	0.0003	0.0002
Index	330.0464	0.0003	0.0002
std_100	216.9622	0.0002	0.0001
bb_high_indicator	191.4289	0.0002	0.0001
bb_low_indicator	102.4155	0.0001	0.0001

▾ PREVIEW POJO

</> Preview POJO

CS

🟥 Model

Model ID: DeepLearning_grid_1_AutoML_20190828_220224_model_1

Algorithm: Deep Learning

Actions: ⟳ Refresh   ⚡ Predict...   ⬇ Download POJO
⬇ Download Model Deployment Package (MOJO)   🖫 Export   ☰ Inspect   🗑 Delete
⬇ Download Gen Model

▸ MODEL PARAMETERS

▾ SCORING HISTORY - DEVIANCE

▾ VARIABLE IMPORTANCES

▸ OUTPUT

▸ COLUMN_TYPES

▸ CROSS_VALIDATION_MODELS
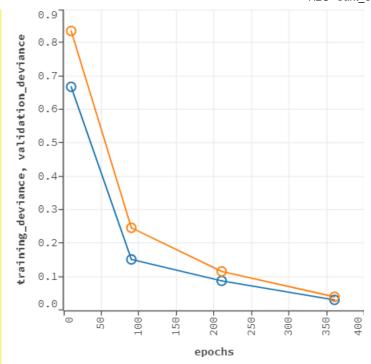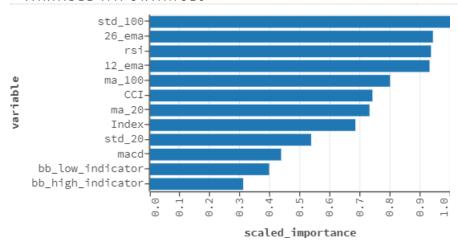
▸ CROSS_VALIDATION_PREDICTIONS

▸ OUTPUT - STATUS OF NEURON LAYERS (PREDICTING SILVERPRICE, REGRESSION, GAUSSIAN DISTRIBUTION, QUADRATIC LOSS, 2,801 WEIGHTS/BIASES, 40.0 KB, 1,620,000 TRAINING SAMPLES, MINI-BATCH SIZE 1)

▾ OUTPUT - SCORING HISTORY

timestamp	duration	training_speed	epochs	iterations	samples	training_rmse	training_devi
2019-08-28 22:35:33	0.000 sec		0	0	0	.	
2019-08-28 22:35:35	3 min 25.423 sec	28753 obs/sec	10.0	1	45000.0	0.8178	0.
2019-08-28 22:35:40	3 min 30.565 sec	60619 obs/sec	90.0	9	405000.0	0.3906	0.
2019-08-28 22:35:45	3 min 46.854 sec	79773 obs/sec	210.0	21	945000.0	0.2975	0.
2019-08-28 22:36:02	3 min 52.556 sec	92492 obs/sec	360.0	36	1620000.0	0.1777	0.

▸ OUTPUT - TRAINING_METRICS

▸ OUTPUT - VALIDATION_METRICS

▸ OUTPUT - CROSS_VALIDATION_METRICS

▸ OUTPUT - CROSS-VALIDATION METRICS SUMMARY

▸ OUTPUT - VARIABLE IMPORTANCES

▾ PREVIEW POJO

</> Preview POJO

timestamp	duration	training_speed	epochs	iterations	samples	training_rmse	training_devi