

Collected Experiment Report: SimpleNN - DeepNN .

10/12/2024

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This is an a	automated	report for	the Neural	networks	on real	estate	dataset;	the t	following	models	have	been
analyzed:												

- SimpleNN
- DeepNN

Experiment description:

Experiment with neural networks on real estate dataset

Model setup

The models have been used for the following forecast purposes:

one_step

The models have been optimized using the following hyperparameters:

- optimizer: ['adam', 'sgd']
- epochs: [100, 200]
- batch_size: [32, 64]
- scaler: [None, StandardScaler(), MinMaxScaler(), RobustScaler(), PowerTransformer()]

And with the following search algorithms:

- o grid
- random

The used performance measure is the neg_mean_absolute_error measure.

Dataset setup



The baseline dataset used for these forecasts is

the 'Real Estate valuation from Sindian Dist., New Taipei City, Taiwan' dataset: 'Real estate valuation of houses in Taiwan, the price denotes the cost of unit area.'.

The test size used for the forecasts is 0.2.

ODataset 1

- name: univariate_only_target

- dataset_type: univariate

prediction_type: one_step

- components: ['one_step_target', 'temporal_features']

ODataset 2

- name: multivariate

- dataset_type: multivariate

- prediction_type: one_step

- components: ['one_step_target', 'feature_columns']

Results

For the models; SimpleNN, DeepNN, the following models and datasets yielded the best results.

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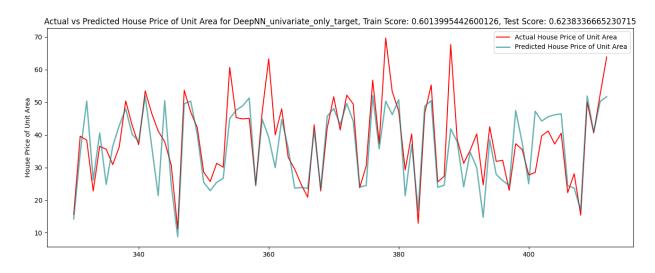


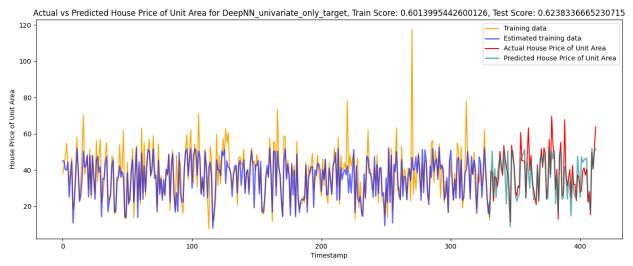
The best model for one_step forecasting.

The best model for one_step forecasting is the DeepNN model. The model has been trained on the univariate_only_target dataset.

The best score for the one_step forecasting is 0.6238336665230715.

Best DeepNN forecast over time





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