From newer to older

# Validation set: last 16 days of train

# Validation set: 2017

**Store sales prediction scores (STL = 365 trend, 7 period, 7 season, robust)**

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Model = Naive drift

MAE: mean = 6363.13, sd = 3694.66, min = 1156.91, max = 21050.07

MSE: mean = 64192549.51, sd = 76134854.1, min = 2097909.98, max = 457287381.6

RMSE: mean = 7013.42, sd = 3873.57, min = 1448.42, max = 21384.28

RMSLE: mean = 0.95, sd = 0.86, min = 0.62, max = 7.07

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Model = Naive seasonal

MAE: mean = 3966.55, sd = 2940.74, min = 1012.22, max = 14603.02

MSE: mean = 33918822.51, sd = 50677321.75, min = 1744277.29, max = 234667386.71

RMSE: mean = 4777.28, sd = 3331.13, min = 1320.71, max = 15318.86

RMSLE: mean = 0.84, sd = 0.86, min = 0.63, max = 7.07

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Model = Exponential smoothing

MAE: mean = 3836.35, sd = 2810.97, min = 802.52, max = 17339.77

MSE: mean = 29501088.36, sd = 49408274.76, min = 1047947.49, max = 309188135.64

RMSE: mean = 4473.39, sd = 3080.57, min = 1023.69, max = 17583.75

RMSLE: mean = 0.85, sd = 0.86, min = 0.59, max = 7.07

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Model = Linear

MAE: mean = 2072.68, sd = 1556.98, min = 621.88, max = 9609.55

MSE: mean = 13505099.33, sd = 27006508.91, min = 892145.95, max = 186283233.07

RMSE: mean = 2947.06, sd = 2195.44, min = 944.53, max = 13648.56

RMSLE: mean = 0.77, sd = 0.87, min = 0.32, max = 7.07

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Model = Linear + AutoARIMA

MAE: mean = 2231.12, sd = 1699.52, min = 548.22, max = 9609.55

MSE: mean = 13054468.23, sd = 26373898.23, min = 581303.54, max = 186283214.04

RMSE: mean = 2897.09, sd = 2159.02, min = 762.43, max = 13648.56

RMSLE: mean = 0.73, sd = 0.87, min = 0.22, max = 7.07

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Model = Linear + RF

MAE: mean = 2330.0, sd = 1719.61, min = 592.78, max = 9609.55

MSE: mean = 15169178.78, sd = 28198825.95, min = 677384.54, max = 186283233.07

RMSE: mean = 3130.16, sd = 2317.6, min = 823.03, max = 13648.56

RMSLE: mean = 0.79, sd = 0.88, min = 0.3, max = 7.07

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Model = Linear + RNN (global)

MAE: mean = 2629.96, sd = 1390.25, min = 762.26, max = 8993.99

MSE: mean = 15303460.93, sd = 24028177.44, min = 1126629.43, max = 163453843.88

RMSE: mean = 3380.1, sd = 1969.36, min = 1061.43, max = 12784.91

RMSLE: mean = 0.73, sd = 0.36, min = 0.34, max = 3.31

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**Store sales prediction scores (STL = 85 trend, 7 period, 7 season, robust)**

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Model = Linear (trend + seasonality feats)

MAE: mean = 2046.32, sd = 1539.36, min = 613.24, max = 9609.55

MSE: mean = 13563682.38, sd = 26863817.51, min = 898487.02, max = 186283233.07

RMSE: mean = 2962.48, sd = 2188.01, min = 947.89, max = 13648.56

RMSLE: mean = 0.78, sd = 0.87, min = 0.36, max = 7.07

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Model = Linear + AutoARIMA (calendar + cyclicality feats)

MAE: mean = 2124.35, sd = 1614.63, min = 557.05, max = 9609.55

MSE: mean = 12206346.55, sd = 25945482.03, min = 594005.27, max = 186283214.04

RMSE: mean = 2785.3, sd = 2109.14, min = 770.72, max = 13648.56

RMSLE: mean = 0.72, sd = 0.88, min = 0.2, max = 7.07

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Model = Linear + RF (calendar + cyclicality feats)

MAE: mean = 2092.38, sd = 1538.2, min = 573.96, max = 9609.55

MSE: mean = 13005342.68, sd = 26391260.62, min = 645534.17, max = 186283233.07

RMSE: mean = 2911.87, sd = 2127.53, min = 803.45, max = 13648.56

RMSLE: mean = 0.76, sd = 0.87, min = 0.32, max = 7.07

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Model = Linear + RNN (global) (calendar + cyclicality feats)

MAE: mean = 5485.38, sd = 1284.81, min = 3229.92, max = 10135.01

MSE: mean = 38436688.17, sd = 23497295.9, min = 13121037.03, max = 146031353.86

RMSE: mean = 5992.42, sd = 1589.83, min = 3622.3, max = 12084.34

RMSLE: mean = 0.9, sd = 0.69, min = 0.51, max = 5.86

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**Store sales prediction scores, baseline models**

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Model = Naive drift

MAE: mean = 6363.13, sd = 3694.66, min = 1156.91, max = 21050.07

MSE: mean = 64192549.51, sd = 76134854.1, min = 2097909.98, max = 457287381.6

RMSE: mean = 7013.42, sd = 3873.57, min = 1448.42, max = 21384.28

RMSLE: mean = 0.95, sd = 0.86, min = 0.62, max = 7.07

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Model = Naive seasonal

MAE: mean = 3966.55, sd = 2940.74, min = 1012.22, max = 14603.02

MSE: mean = 33918822.51, sd = 50677321.75, min = 1744277.29, max = 234667386.71

RMSE: mean = 4777.28, sd = 3331.13, min = 1320.71, max = 15318.86

RMSLE: mean = 0.84, sd = 0.86, min = 0.63, max = 7.07

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Model = Exponential smoothing

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MSE: mean = 29501088.36, sd = 49408274.76, min = 1047947.49, max = 309188135.64

RMSE: mean = 4473.39, sd = 3080.57, min = 1023.69, max = 17583.75

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