From newer to older

# Validation set: last 16 days of train

## Full series (no STL)

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Model = D-Linear (global, all features)

MAE: mean = 1624.7, sd = 793.53, min = 514.4, max = 4316.98

MSE: mean = 5657132.88, sd = 6295225.84, min = 416817.5, max = 33256133.97

RMSE: mean = 2109.67, sd = 1098.38, min = 645.61, max = 5766.81

RMSLE: mean = 0.17, sd = 0.05, min = 0.1, max = 0.34

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## STL = 731 trend, 7 period, 29 season, robust

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Model = Linear (time features only)

MAE: mean = 2511.76, sd = 2258.51, min = 598.33, max = 14206.44

MSE: mean = 14628336.0, sd = 30947397.16, min = 514776.92, max = 211145503.82

RMSE: mean = 2997.62, sd = 2375.41, min = 717.48, max = 14530.85

RMSLE: mean = 0.24, sd = 0.18, min = 0.11, max = 1.46

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Model = Linear + linear

MAE: mean = 2318.86, sd = 2071.36, min = 520.66, max = 14206.44

MSE: mean = 12746997.51, sd = 29520157.62, min = 395008.32, max = 211145504.03

RMSE: mean = 2809.36, sd = 2203.29, min = 628.5, max = 14530.85

RMSLE: mean = 0.23, sd = 0.18, min = 0.1, max = 1.46

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Model = Linear + AutoARIMA

MAE: mean = 2179.3, sd = 2057.62, min = 484.44, max = 14206.44

MSE: mean = 11690697.96, sd = 29179860.06, min = 345754.65, max = 211145503.97

RMSE: mean = 2642.45, sd = 2169.83, min = 588.01, max = 14530.85

RMSLE: mean = 0.21, sd = 0.18, min = 0.09, max = 1.46

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Model = Linear + RF

MAE: mean = 2498.83, sd = 2248.24, min = 447.34, max = 14206.44

MSE: mean = 15363910.49, sd = 32058639.16, min = 319104.04, max = 211145503.82

RMSE: mean = 2999.86, sd = 2522.84, min = 564.89, max = 14530.85

RMSLE: mean = 0.23, sd = 0.18, min = 0.09, max = 1.46

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Model = Linear + RNN (global)

MAE: mean = 2151.26, sd = 2034.56, min = 564.97, max = 14204.05

MSE: mean = 11567160.11, sd = 29169982.18, min = 471367.27, max = 211075345.48

RMSE: mean = 2622.3, sd = 2165.81, min = 686.56, max = 14528.43

RMSLE: mean = 0.21, sd = 0.18, min = 0.09, max = 1.46

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Model = D-Linear (global, time features only)

MAE: mean = 2027.07, sd = 1180.84, min = 622.35, max = 5929.7

MSE: mean = 8808378.38, sd = 10797195.24, min = 682621.1, max = 55397312.59

RMSE: mean = 2573.61, sd = 1478.14, min = 826.21, max = 7442.94

RMSLE: mean = 0.2, sd = 0.05, min = 0.12, max = 0.33

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Model = D-Linear + linear

MAE: mean = 1854.96, sd = 1021.84, min = 639.91, max = 5669.99

MSE: mean = 7691978.73, sd = 9626026.26, min = 562319.47, max = 53829601.48

RMSE: mean = 2410.56, sd = 1371.56, min = 749.88, max = 7336.87

RMSLE: mean = 0.19, sd = 0.05, min = 0.11, max = 0.34

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Model = D-Linear (global) + AutoARIMA

MAE: mean = 1772.44, sd = 1024.68, min = 539.6, max = 5281.38

MSE: mean = 7269797.41, sd = 9278789.51, min = 508493.81, max = 46241148.37

RMSE: mean = 2314.82, sd = 1382.53, min = 713.09, max = 6800.08

RMSLE: mean = 0.18, sd = 0.04, min = 0.11, max = 0.31

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Model = D-Linear (global) + RF

MAE: mean = 1978.79, sd = 1326.35, min = 482.79, max = 6370.53

MSE: mean = 9816672.27, sd = 15384121.65, min = 355661.11, max = 68894394.57

RMSE: mean = 2542.33, sd = 1831.18, min = 596.37, max = 8300.26

RMSLE: mean = 0.18, sd = 0.06, min = 0.11, max = 0.41

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Model = D-Linear (global) + RNN (global)

MAE: mean = 1749.69, sd = 932.76, min = 496.3, max = 5317.39

MSE: mean = 6888557.89, sd = 8244698.01, min = 412337.88, max = 47259155.39

RMSE: mean = 2290.54, sd = 1281.4, min = 642.14, max = 6874.53

RMSLE: mean = 0.18, sd = 0.05, min = 0.1, max = 0.34

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Chart, line chart

Description automatically generated

## Baseline

Store sales prediction scores, baseline models

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Model = Naive drift

MAE: mean = 2328.18, sd = 1136.5, min = 451.73, max = 5366.74

MSE: mean = 9456240.96, sd = 9595478.74, min = 337900.0, max = 39601845.72

RMSE: mean = 2766.82, sd = 1341.99, min = 581.29, max = 6293.0

RMSLE: mean = 0.24, sd = 0.08, min = 0.09, max = 0.49

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Model = Naive seasonal

MAE: mean = 2030.88, sd = 1035.46, min = 560.46, max = 5120.99

MSE: mean = 8805785.35, sd = 10045164.66, min = 469271.29, max = 48934329.01

RMSE: mean = 2621.3, sd = 1390.89, min = 685.03, max = 6995.31

RMSLE: mean = 0.22, sd = 0.07, min = 0.11, max = 0.36

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Model = Exponential smoothing

MAE: mean = 1765.53, sd = 971.37, min = 522.15, max = 4864.76

MSE: mean = 6892708.81, sd = 8377085.1, min = 506096.62, max = 40186931.16

RMSE: mean = 2284.92, sd = 1293.01, min = 711.4, max = 6339.32

RMSLE: mean = 0.18, sd = 0.05, min = 0.1, max = 0.35

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