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Walmart Sales Data (2010 Feb - 2012 Oct)
Source: kaggle.com

Forecast method: Naive method

Model Information:
Call: naive(y = sales_ts, h = 12)

Residual sd: 2072.5004

Error measures:
                    ME   RMSE      MAE        MPE
Training set -10.17181 2072.5 1033.594 -0.7061221
                 MAPE       MASE       ACF1
Training set 6.190434 0.06469384 -0.4164283

Forecasts:
     Point Forecast     Lo 80    Hi 80     Lo 95     Hi 95
1002       15391.73 12735.710 18047.74 11329.700     19453.75
1009       15391.73 11635.552 19147.90  9647.153     21136.30
1016       15391.73 10791.371 19992.08  8356.090     22427.36
1023       15391.73 10079.694 20703.76  7267.674     23515.78
1030       15391.73  9452.693 21330.76  6308.759     24474.69
1037       15391.73  8885.842 21897.61  5441.835     25341.62
1044       15391.73  8364.568 22418.88  4644.615     26138.84
1051       15391.73  7879.378 22904.07  3902.581     26880.87
1058       15391.73  7423.677 23359.77  3205.647     27577.80
1065       15391.73  6992.665 23790.79  2546.471     28236.98
1072       15391.73  6582.717 24200.73  1919.509     28863.94
1079       15391.73  6191.016 24592.44  1320.455     29463.00


This is a weekly forecast. For Oct. 02, Oct. 09, Oct. 16, onwards, etc.
Forecast is for first 12 months (h=12).
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Forecast method: Simple exponential smoothing

Model Information:
Simple exponential smoothing

Call:
 ses(y = sales_ts, h = 12)

  Smoothing parameters:
    alpha = 0.3469

  Initial states:
    l = 16240.838

  sigma:  1807.13

     AIC     AICc      BIC
2858.528 2858.701 2867.417

Error measures:
                    ME     RMSE     MAE        MPE
Training set -16.99847 1794.449 1002.96 -0.9215599
                 MAPE      MASE      ACF1
Training set 6.023618 0.0627764 0.0773382

Forecasts:
     Point Forecast    Lo 80    Hi 80     Lo 95    Hi 95
1002       15397.54 13081.61 17713.47 11855.627 18939.45
1009       15397.54 12946.20 17848.88 11648.533 19146.54
1016       15397.54 12817.88 17977.19 11452.296 19342.78
1023       15397.54 12695.66 18099.42 11265.367 19529.71
1030       15397.54 12578.72 18216.35 11086.536 19708.54
1037       15397.54 12466.45 18328.62 10914.833 19880.24
1044       15397.54 12358.33 18436.75 10749.469 20045.61
1051       15397.54 12253.92 18541.15 10589.790 20205.29
1058       15397.54 12152.87 18642.21 10435.246 20359.83
1065       15397.54 12054.87 18740.20 10285.371 20509.70
1072       15397.54 11959.67 18835.41 10139.768 20655.31
1079       15397.54 11867.03 18928.05  9998.089 20796.99
```

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Forecast method: Holt's method

Model Information:
Holt's method

Call:
 holt(y = sales_ts, h = 12)

  Smoothing parameters:
    alpha = 0.3466
    beta  = 1e-04

  Initial states:
    l = 16160.7937
    b = -17.122

  sigma:  1820.584

     AIC     AICc      BIC
2862.607 2863.045 2877.421

Error measures:
                   ME     RMSE      MAE        MPE
Training set 32.52913 1794.941 1002.624 -0.6089618
                 MAPE       MASE       ACF1
Training set 6.007256 0.06275537 0.07767507

Forecasts:
     Point Forecast    Lo 80    Hi 80     Lo 95    Hi 95
1002       15349.55 13016.37 17682.72 11781.268 18917.83
1009       15332.89 12863.44 17802.34 11556.191 19109.59
1016       15316.23 12717.57 17914.90 11341.918 19290.55
1023       15299.58 12577.76 18021.40 11136.910 19462.24
1030       15282.92 12443.21 18122.63 10939.961 19625.88
1037       15266.26 12313.31 18219.22 10750.107 19782.42
1044       15249.61 12187.53 18311.69 10566.559 19932.65
1051       15232.95 12065.44 18400.46 10388.667 20077.23
1058       15216.29 11946.70 18485.89 10215.882 20216.70
1065       15199.64 11830.99 18568.28 10047.741 20351.53
1072       15182.98 11718.06 18647.90  9883.845 20482.11
1079       15166.32 11607.68 18724.96  9723.850 20608.79
```

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Series: sales_ts
ARIMA(2,0,2) with non-zero mean

Coefficients:
          ar1      ar2     ma1     ma2        mean
      -0.9854  -0.3794  1.4003  0.8879  15982.0665
s.e.   0.1272   0.1282  0.0830  0.0887    180.0609

sigma^2 estimated as 2492096:  log likelihood=-1254.32
AIC=2520.64   AICc=2521.26   BIC=2538.42

Training set error measures:
                    ME     RMSE     MAE        MPE
Training set -2.898308 1550.793 921.785 -0.7467573
                MAPE       MASE       ACF1
Training set 5.41143 0.05769559 0.03615084
```

```
> summary(model_tbats)
                  Length Class  Mode
lambda               1   -none- numeric
alpha                1   -none- numeric
beta                 1   -none- numeric
damping.parameter    1   -none- numeric
gamma.values         0   -none- NULL
ar.coefficients      1   -none- numeric
ma.coefficients      5   -none- numeric
likelihood           1   -none- numeric
optim.return.code    1   -none- numeric
variance             1   -none- numeric
AIC                  1   -none- numeric
parameters           2   -none- list
seed.states          8   -none- numeric
fitted.values      143   xts    numeric
errors             143   xts    numeric
x                 1144   -none- numeric
seasonal.periods     0   -none- NULL
y                  143   xts    numeric
call                 2   -none- call
series               1   -none- character
method               1   -none- character
```