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Traceback (most recent call last):

  File "D:\Documentos\Faculdade\Eletivas\Modelagem Analítica\modelo_arima_previsao.py",
line 60, in <module>
    model_fit = model.fit(disp=0)

  File "C:\Users\kelly\anaconda3\lib\site-packages\statsmodels\tsa\arima_model.py", line
996, in fit
    mlefit = super(ARMA, self).fit(start_params, method=solver,

  File "C:\Users\kelly\anaconda3\lib\site-packages\statsmodels\base\model.py", line 518,
in fit
```

```
    xopt, retvals, optim_settings = optimizer._fit(f, score, start_params,

  File "C:\Users\kelly\anaconda3\lib\site-packages\statsmodels\base\optimizer.py", line
215, in _fit
    xopt, retvals = func(objective, gradient, start_params, fargs, kwargs,

  File "C:\Users\kelly\anaconda3\lib\site-packages\statsmodels\base\optimizer.py", line
437, in _fit_lbfgs
    retvals = optimize.fmin_l_bfgs_b(func, start_params, maxiter=maxiter,

  File "C:\Users\kelly\anaconda3\lib\site-packages\scipy\optimize\lbfgsb.py", line 197, in
fmin_l_bfgs_b
    res = _minimize_lbfgsb(fun, x0, args=args, jac=jac, bounds=bounds,

  File "C:\Users\kelly\anaconda3\lib\site-packages\scipy\optimize\lbfgsb.py", line 360, in
_minimize_lbfgsb
    f, g = func_and_grad(x)

  File "C:\Users\kelly\anaconda3\lib\site-packages\scipy\optimize
\_differentiable_functions.py", line 201, in fun_and_grad
    self._update_grad()

  File "C:\Users\kelly\anaconda3\lib\site-packages\scipy\optimize
\_differentiable_functions.py", line 171, in _update_grad
    self._update_grad_impl()

  File "C:\Users\kelly\anaconda3\lib\site-packages\scipy\optimize
\_differentiable_functions.py", line 91, in update_grad
    self.g = approx_derivative(fun_wrapped, self.x, f0=self.f,

  File "C:\Users\kelly\anaconda3\lib\site-packages\scipy\optimize\_numdiff.py", line 426,
in approx_derivative
    return _dense_difference(fun_wrapped, x0, f0, h,

  File "C:\Users\kelly\anaconda3\lib\site-packages\scipy\optimize\_numdiff.py", line 497,
in _dense_difference
    df = fun(x) - f0

  File "C:\Users\kelly\anaconda3\lib\site-packages\scipy\optimize\_numdiff.py", line 377,
in fun_wrapped
    f = np.atleast_1d(fun(x, *args, **kwargs))

  File "C:\Users\kelly\anaconda3\lib\site-packages\scipy\optimize
\_differentiable_functions.py", line 70, in fun_wrapped
    return fun(x, *args)

  File "C:\Users\kelly\anaconda3\lib\site-packages\statsmodels\base\model.py", line 500,
in f
    return -self.loglike(params, *args) / nobs

  File "C:\Users\kelly\anaconda3\lib\site-packages\statsmodels\tsa\arima_model.py", line
810, in loglike
    return self.loglike_kalman(params, set_sigma2)

  File "C:\Users\kelly\anaconda3\lib\site-packages\statsmodels\tsa\arima_model.py", line
```

```
820, in loglike_kalman
    return KalmanFilter.loglike(params, self, set_sigma2)

  File "C:\Users\kelly\anaconda3\lib\site-packages\statsmodels\tsa\kalmanf
\kalmanfilter.py", line 218, in loglike
    loglike, sigma2 = kalman_loglike.kalman_loglike_double(

  File "statsmodels\tsa\kalmanf\kalman_loglike.pyx", line 333, in
statsmodels.tsa.kalmanf.kalman_loglike.kalman_loglike_double

  File "<__array_function__ internals>", line 2, in sum

KeyboardInterrupt


In [4]:         'D:/Documentos/Faculdade/Eletivas/Modelagem Analítica/
modelo_arima_previsao.py'      ='D:/Documentos/Faculdade/Eletivas/Modelagem Analítica'
Traceback (most recent call last):

  File "D:\Documentos\Faculdade\Eletivas\Modelagem Analítica\modelo_arima_previsao.py",
line 32, in <module>
    df_week_test = df_testv

NameError: name 'df_testv' is not defined


In [5]:         'D:/Documentos/Faculdade/Eletivas/Modelagem Analítica/
modelo_arima_previsao.py'      ='D:/Documentos/Faculdade/Eletivas/Modelagem Analítica'
Traceback (most recent call last):

  File "D:\Documentos\Faculdade\Eletivas\Modelagem Analítica\modelo_arima_previsao.py",
line 33, in <module>
    df_week['datetime'] = df['datetime']

NameError: name 'df' is not defined


In [6]:         'D:/Documentos/Faculdade/Eletivas/Modelagem Analítica/
modelo_arima_previsao.py'      ='D:/Documentos/Faculdade/Eletivas/Modelagem Analítica'
Traceback (most recent call last):

  File "C:\Users\kelly\anaconda3\lib\site-packages\pandas\core\indexes\base.py", line
2646, in get_loc
    return self._engine.get_loc(key)

  File "pandas\_libs\index.pyx", line 111, in pandas._libs.index.IndexEngine.get_loc

  File "pandas\_libs\index.pyx", line 138, in pandas._libs.index.IndexEngine.get_loc

  File "pandas\_libs\hashtable_class_helper.pxi", line 1619, in
pandas._libs.hashtable.PyObjectHashTable.get_item

  File "pandas\_libs\hashtable_class_helper.pxi", line 1627, in
pandas._libs.hashtable.PyObjectHashTable.get_item
```

```
KeyError: 'datetime'


During handling of the above exception, another exception occurred:

Traceback (most recent call last):

  File "D:\Documentos\Faculdade\Eletivas\Modelagem Analítica\modelo_arima_previsao.py",
line 33, in <module>
    df_week['datetime'] = df_test['datetime']

  File "C:\Users\kelly\anaconda3\lib\site-packages\pandas\core\frame.py", line 2800, in
__getitem__
    indexer = self.columns.get_loc(key)

  File "C:\Users\kelly\anaconda3\lib\site-packages\pandas\core\indexes\base.py", line
2648, in get_loc
    return self._engine.get_loc(self._maybe_cast_indexer(key))

  File "pandas\_libs\index.pyx", line 111, in pandas._libs.index.IndexEngine.get_loc

  File "pandas\_libs\index.pyx", line 138, in pandas._libs.index.IndexEngine.get_loc

  File "pandas\_libs\hashtable_class_helper.pxi", line 1619, in
pandas._libs.hashtable.PyObjectHashTable.get_item

  File "pandas\_libs\hashtable_class_helper.pxi", line 1627, in
pandas._libs.hashtable.PyObjectHashTable.get_item

KeyError: 'datetime'


In [7]:         'D:/Documentos/Faculdade/Eletivas/Modelagem Analítica/
modelo_arima_previsao.py'      ='D:/Documentos/Faculdade/Eletivas/Modelagem Analítica'
Traceback (most recent call last):

  File "D:\Documentos\Faculdade\Eletivas\Modelagem Analítica\modelo_arima_previsao.py",
line 33, in <module>
    df_week_test = cdf_test.set_index('datetime',
drop=False).groupby([pd.Grouper(key='datetime',freq='W')])['value'].mean().reset_index()

NameError: name 'cdf_test' is not defined


In [8]:         'D:/Documentos/Faculdade/Eletivas/Modelagem Analítica/
modelo_arima_previsao.py'      ='D:/Documentos/Faculdade/Eletivas/Modelagem Analítica'
                              ARMA Model Results
==============================================================================
Dep. Variable:                  value   No. Observations:                   62
Model:                     ARMA(1, 0)   Log Likelihood                -527.520
Method:                       css-mle   S.D. of innovations           1193.037
Date:                Tue, 03 Nov 2020   AIC                           1061.040
Time:                        21:23:25   BIC                           1067.421
Sample:                    09-02-2018   HQIC                          1063.546
                         - 11-03-2019
```

```
==============================================================================
                 coef    std err          z      P>|z|      [0.025      0.975]
------------------------------------------------------------------------------
const        2.839e+04    472.728     60.049      0.000    2.75e+04    2.93e+04
ar.L1.value     0.6890      0.092      7.506      0.000       0.509       0.869
                                    Roots
=============================================================================
                  Real          Imaginary           Modulus         Frequency
-----------------------------------------------------------------------------
AR.1            1.4514           +0.0000j            1.4514            0.0000
-----------------------------------------------------------------------------
                 0
count    62.000000
mean     22.301515
std    1215.736682
min   -3458.210331
25%    -487.731338
50%     -65.006855
75%     722.760590
max    4075.823077
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```

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predicted=29927.250008, expected=29534.845238
predicted=29234.755896, expected=27793.428571
predicted=27902.855356, expected=27704.926587
predicted=27834.684336, expected=29387.482143
predicted=29116.914710, expected=30495.243056
predicted=29967.913325, expected=31127.004960
predicted=30465.451050, expected=27964.310516
predicted=28041.035807, expected=27421.727183
predicted=27629.511707, expected=27507.818452
predicted=27693.989996, expected=27386.424603
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predicted=27599.647278, expected=26010.014881
predicted=26550.424389, expected=27221.331349
predicted=27471.781271, expected=27091.276786
predicted=27370.862562, expected=26055.796627
predicted=26578.386616, expected=28465.311508
predicted=28408.784471, expected=28920.114087
predicted=28752.585727, expected=29753.233135
predicted=29383.202490, expected=29902.199405
predicted=29499.648560, expected=27430.395833
predicted=27634.723348, expected=30463.140873
predicted=29904.923128, expected=29215.953373
predicted=28972.721475, expected=26882.199405
predicted=27239.270049, expected=28758.959325
predicted=28629.054206, expected=31379.640873
predicted=30570.707531, expected=32847.825397
predicted=31710.903940, expected=32040.109127
predicted=31117.282392, expected=30164.936508
predicted=29698.482012, expected=30294.746032
predicted=29801.178735, expected=29579.065476
predicted=29265.821975, expected=29148.874008
predicted=28945.405359, expected=29011.028770
predicted=28842.465409, expected=27707.737103
predicted=27867.356023, expected=27695.804563
predicted=27857.776803, expected=28524.249008
predicted=28476.902010, expected=27837.237103
predicted=27963.271689, expected=27215.626984
predicted=27497.643461, expected=24464.105159
predicted=25419.082216, expected=26253.451389
predicted=26772.000423, expected=27095.767857
predicted=27401.557376, expected=26036.425595
predicted=26602.944872, expected=26893.187500
predicted=27243.952745, expected=26921.321429
predicted=27262.966924, expected=27935.081349
predicted=28021.112454, expected=27798.235119
predicted=27919.169845, expected=28352.766865
predicted=28333.686261, expected=31656.932540
predicted=30804.712871, expected=31924.457341
predicted=31026.240547, expected=28818.877976
predicted=28686.219834, expected=29212.104167
predicted=28979.740699, expected=31492.288690
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