```
Filename: MA_numpy.py

Line #    Mem usage    Increment  Occurrences   Line Contents
=============================================================
    16    129.0 MiB    129.0 MiB           1   @profile
    17                                         def my_func():
    18                                             #time and memory
    19    129.0 MiB      0.0 MiB           1       start = time.time()
    20    129.1 MiB      0.0 MiB           1       tracemalloc.start()
    21                                             # load dataset
    22    136.7 MiB      7.7 MiB           1       X = np.load('C:/Users/Mriank
Ghosh/Desktop/shell/dataset/MA_1m.npy')
    23                                             # split dataset
    24    136.7 MiB      0.0 MiB           1       train_size = int(len(X) * 0.80)
    25    136.7 MiB      0.0 MiB           1       train, test = X[0:train_size],
X[train_size:len(X)]
    26                                             #1
iteration**************************************
    27                                             # train moving average
    28                                             # fit model
    29    156.1 MiB     19.3 MiB           1       model = ARIMA(train, order=(0,
0, 1))
    30    960.5 MiB    804.5 MiB           1       model_fit = model.fit()
    31   1005.4 MiB     44.8 MiB           1       predictions =
model_fit.predict(start=len(train), end=len(train)+len(test)-1, dynamic=False)
    32                                             #test accuracy
    33   1005.4 MiB      0.0 MiB           1       error1 =
mean_squared_error(test, predictions)
    34   1005.4 MiB      0.0 MiB           1       print(error1)
    35                                             #metrics
    36   1005.4 MiB      0.0 MiB           1       end = time.time()
    37   1005.4 MiB      0.0 MiB           1       t1=end-start
    38   1005.4 MiB      0.0 MiB           1
m1=tracemalloc.get_traced_memory()
    39   1005.4 MiB      0.0 MiB           1       d1=m1[1]-m1[0]
    40   1005.4 MiB      0.0 MiB           1       print("The time of execution of
above program is :", t1/60)
    41   1005.4 MiB      0.0 MiB           1       print("(current memory usage)
:",m1[0]/1000000)
    42   1005.4 MiB      0.0 MiB           1       print("(peak memory usage)
:",m1[1]/1000000)
    43   1005.4 MiB      0.0 MiB           1       print("(memory usage)
:",d1/1000000)
    44   1005.4 MiB      0.0 MiB           1       tracemalloc.stop()
```