Assume that Guzman Energy is signing future contracts of Product 1 with X company.

There are 5000 contracts in total with each contract size of 1MW.

The price is 24.62$.

Guzman Energy predicts the market price on the execution day to be 22.62$. So that Guzman Energy could earn 10k dollars.

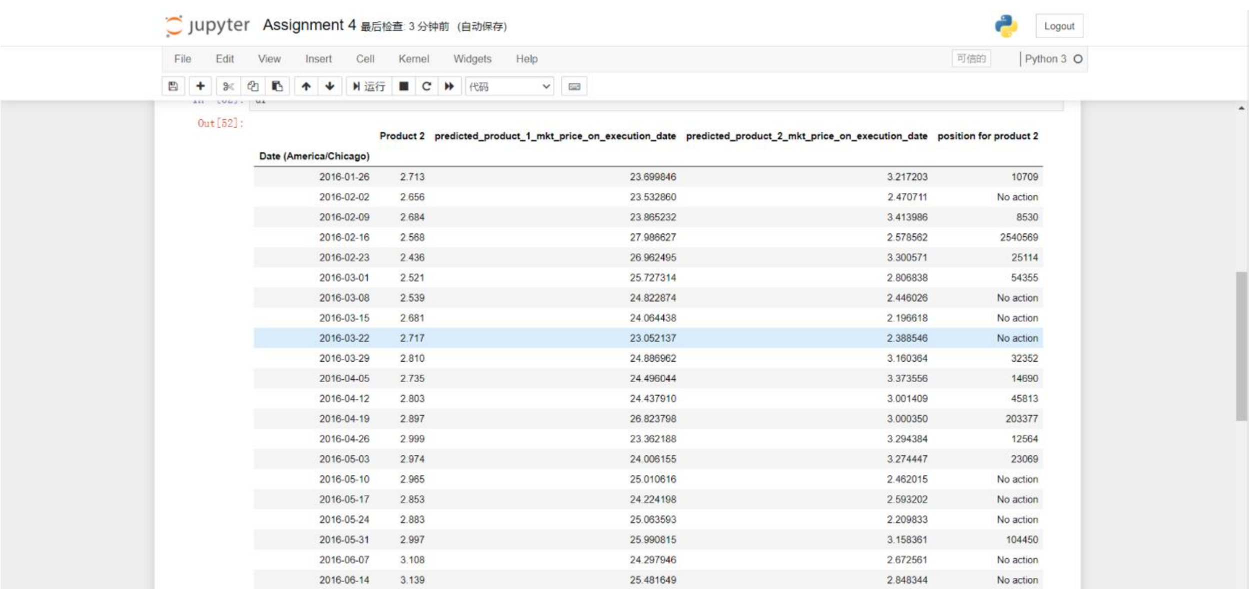
Supposing for each week, we have the predicted market price on the execution day of each product and the prediction is accurate. The hedge strategy will be if we find we cannot make 10k dollars based on product 1, then we long product 2 if we find the price of product 2 is lower than the predicted market price.

To conclude, the assumptions are

1. We want to ensure 10k dollars profit

2. The prediction of market price on contract execution date is accurate

The result is shown below,


jupyter Assignment 4 最后检查: 3 分钟前 (自动保存)

Out[52]:

Date (America/Chicago)	Product 2	predicted_product_1_mkt_price_on_execution_date	predicted_product_2_mkt_price_on_execution_date	position for product 2
2016-01-26	2.713	23.699846	3.217203	10709
2016-02-02	2.656	23.532860	2.470711	No action
2016-02-09	2.684	23.865232	3.413986	8530
2016-02-16	2.568	27.986627	2.578562	2540569
2016-02-23	2.436	26.962495	3.300571	25114
2016-03-01	2.521	25.727314	2.806838	54355
2016-03-08	2.539	24.822874	2.446026	No action
2016-03-15	2.681	24.064438	2.196618	No action
2016-03-22	2.717	23.052137	2.388546	No action
2016-03-29	2.810	24.886962	3.160364	32352
2016-04-05	2.735	24.496044	3.373556	14690
2016-04-12	2.803	24.437910	3.001409	45813
2016-04-19	2.897	26.823798	3.000350	203377
2016-04-26	2.999	23.362188	3.294384	12564
2016-05-03	2.974	24.006155	3.274447	23069
2016-05-10	2.965	25.010616	2.462015	No action
2016-05-17	2.853	24.224198	2.593202	No action
2016-05-24	2.883	25.063593	2.209833	No action
2016-05-31	2.997	25.990815	3.158361	104450
2016-06-07	3.108	24.297946	2.672561	No action
2016-06-14	3.139	25.481649	2.848344	No action
2016-06-21	3.225	26.900292	2.825909	No action