1. Running environment：
2. python 3.6,tensorflow-gpu 1.3

#Function of main codes#

1. ActorNetwork:To build ActorNetwork and to configure relative initial processing
2. CriticNetwork:To build CriticNetwork and to configure relative initial processing
3. ddpg:mainly package some training ,store memory item,select action functions
4. ddpg\_model:ddpg.Do further package for Network’s optimization based on class Agent.
5. OU：The initialization of OU process,and some function add OU noise to action output by ActorNetwork.
6. Replay Buffer：Memory Replay Buffer,mainly define relative function for Buffer.
7. Sp500\_core:core code to train DDPG model and test the hedging performance.
8. Illustration of training Data：

We used Data of call option on SPX,and filter these contracts:

1. The contract whose lifetime less than two weeks.
2. The contract whose average BS delta greater than 0.95.

Before training,we upset the training data to eliminate the sample correlation.