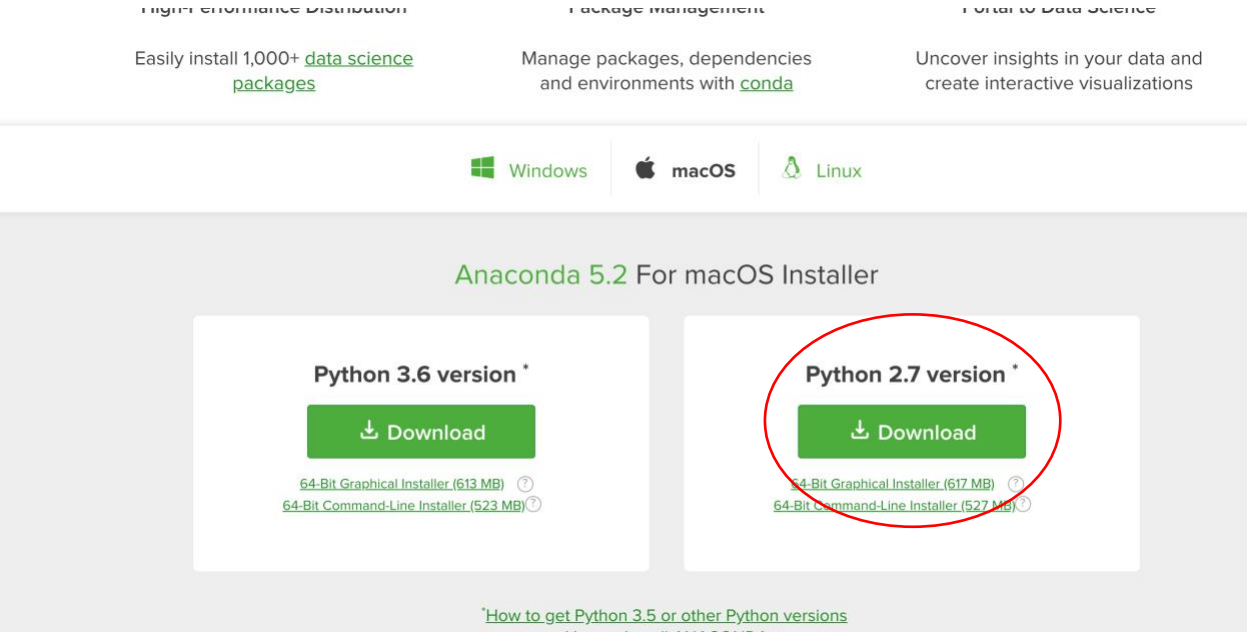
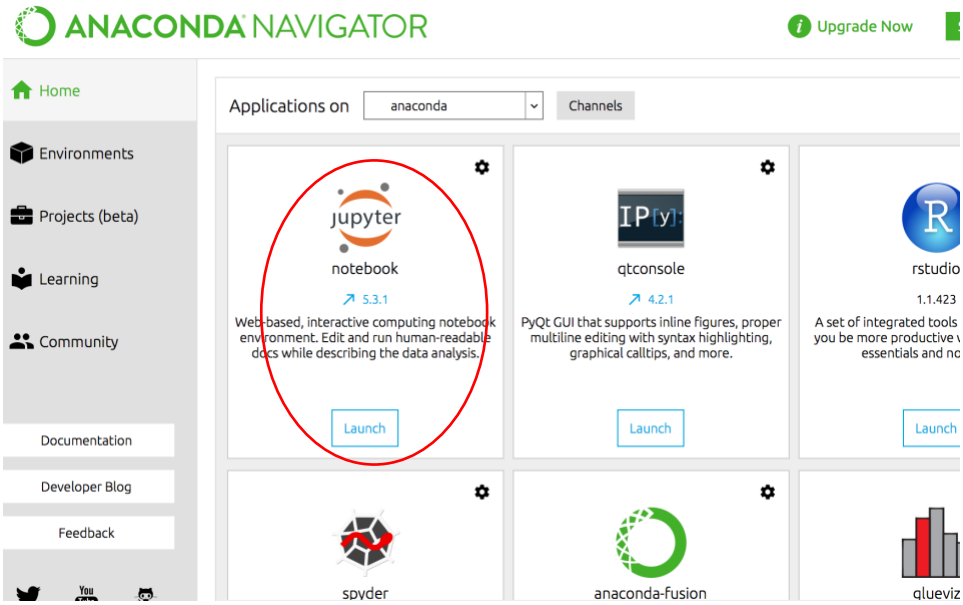
1. Download the anaconda python 2.7 distribution, which will create a separate python environment. There is no need to uninstall python 3.6

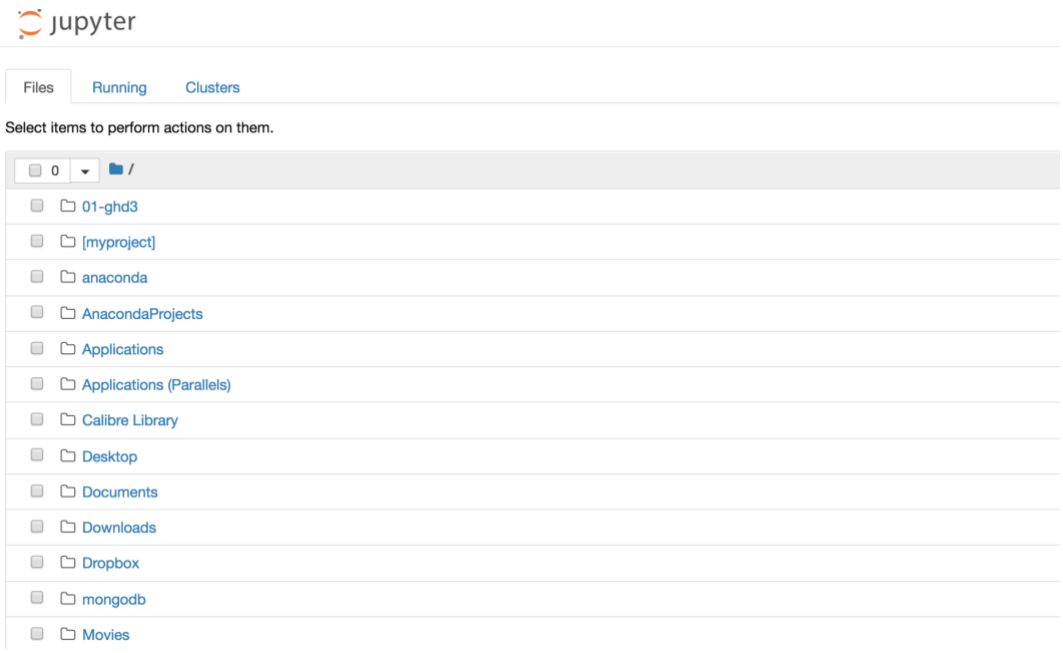
https://www.anaconda.com/download/#macos



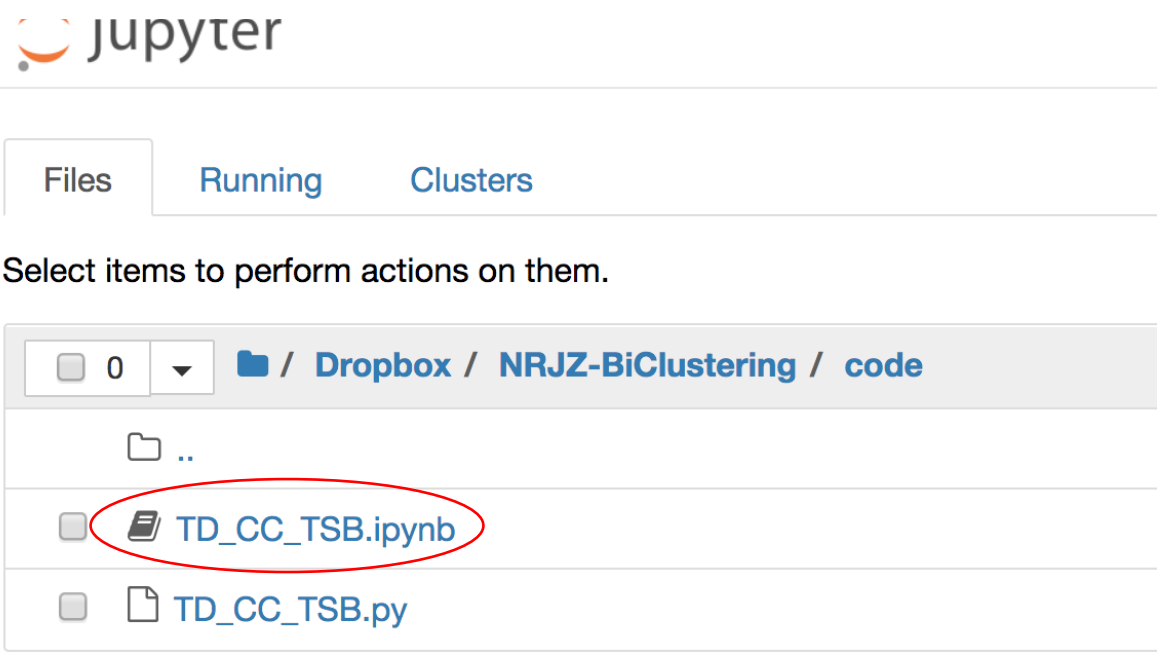
2. After download the anaconda and install it. Click Anaconda-Navigator icon. Then click the launch Jupiter.



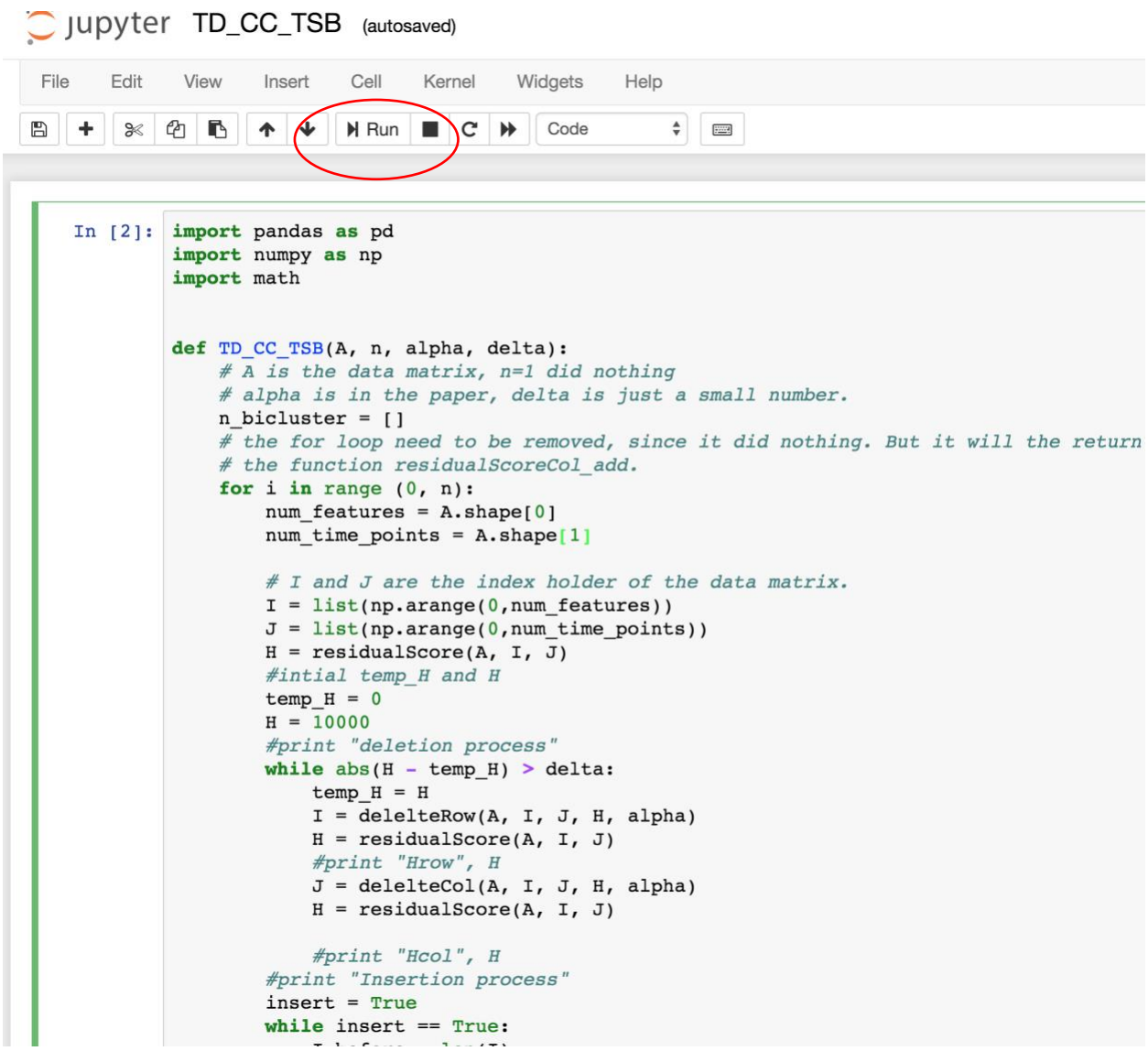
3. An interface will show up in the internet browser. Then navigate to the our dropbox share folder



4. Click the TD_CC_TSB.ipynb rather than the TD_CC_TSB.py. The .py file need to be run from command line and is good for cluster computing.



5. Click run or use the keyboard shift + enter. It will run automatically, since I have put two days data files in the same folder as the code. So there is no need to set up file directory.




```
In [2]: import pandas as pd
        import numpy as np
        import math


        def TD_CC_TSB(A, n, alpha, delta):
            # A is the data matrix, n=1 did nothing
            # alpha is in the paper, delta is just a small number.
            n_bicluster = []
            # the for loop need to be removed, since it did nothing. But it will the return
            # the function residualScoreCol_add.
            for i in range (0, n):
                num_features = A.shape[0]
                num_time_points = A.shape[1]

                # I and J are the index holder of the data matrix.
                I = list(np.arange(0,num_features))
                J = list(np.arange(0,num_time_points))
                H = residualScore(A, I, J)
                #intial temp_H and H
                temp_H = 0
                H = 10000
                #print "deletion process"
                while abs(H - temp_H) > delta:
                    temp_H = H
                    I = delelteRow(A, I, J, H, alpha)
                    H = residualScore(A, I, J)
                    #print "Hrow", H
                    J = delelteCol(A, I, J, H, alpha)
                    H = residualScore(A, I, J)

                    #print "Hcol", H
                #print "Insertion process"
                insert = True
                while insert == True:
```

6. After the program finish. The follow files will be in the same folder. The files with names starting with date is the identified bicluster. The date_bicluster file will record the date, the number of biclusters and the number stocks explained.