**S2T1 一些学习笔记**

1.”**requirements.txt**”

(commonly seen in Github repository or other Python projects)

This requirements.txt file is used for specifying **what python packages are required to run the project you are looking at**. *Typically the requirements.txt file is located in the root directory of your project.*

In the requirement.txt file, normally we have a line for each package and its version number. This is important because when starting developing python applications, one will develop the app with specific versions of the packages in mind. The package maintainer might make changes later which would break your application, and it’s too much work to keep track of every downstream package change. So the developer would want to keep track of what version of each package he/she is using to prevent unexpected changes.

How to practically use a requirement.txt file:

We don’t have to manually install and track every package that is installed on our computer.

First of all, “**pip freeze**” command will list completely every package installed on one’s computer along with the version numbers; one can also copy and paste this output into a requirements.txt file.

Secondly, one can use “**pip install <package name>==<version number>**” to install a specific version of a package. ***By default, pip will install the latest version of each package***; but this MIGHT NOT be the behavior you want actually -- so comes requirements.txt file.

[\*] To install packages using requirement.txt file:

1).open a terminal

2).**navigate to the folder with your requirement.txt (located)**

3).run: “**pip install -r requirements.txt**”

4).done installing dependencies

\*requirements.txt file is closely related to Python virtual management: this helps prevent version conflicts between different projects, and also makes it easier to keep track of one’s packages.

*[Source: [https://www.idkrtm.com/what-is-the-python-requirements-txt/#:~:text=txt%20This%20requirements.,root%20directory%20of%20your%20project.]](https://www.idkrtm.com/what-is-the-python-requirements-txt/" \l ":~:text=txt%20This%20requirements.,root%20directory%20of%20your%20project.)*

2.”event-driven” (backtesting)

3.\*\*\*”backtrader” framework使用：

【Documentation】:

几个始终经常使用的重要object class:

**-Strategy**

**-Indicators**

**-Data Feeds**

**-Lines**

**-Parameters**

**-Cerebro (running engine?)**

重要概念：

1).Data Feeds, Indicators, and Strategies have ***lines*** object.

2).A **line** is a succession of points that when joined together form this line. When talking about the markets, ***a Data Feed has usually the following set of points per day:***

***“Open, High, Low, Close, Volume, OpenInterest”***

For example, the series of “Open”s along time is a Line, and thus a Data Feed has usually 6 lines. (If considering “DateTime”(actual reference for a single point), we could count 7 lines.)

3).”**Index 0 representing ‘current’ approach**”