how to use libs(package)

pip(without anaconda)

```
pip install package_name
```

conda

Activate the conda env first.

```
conda install package_name
```

numpy(data structure)

"The fundamental package for scientific computing with Python"
numpy website
Support a large number of **dimensional arrays** and matrix operations.
It also provides a large number of mathematical functions library for array operations.

why numpy?

- fast
- easy
- wildly used

How to use?

A very good introduction to numpy
or official tutorial

scipy(algorithm)

"Fundamental algorithms for scientific computing in Python"
scipy website
Scipy contains modules for optimization, linear algebra, integration, interpolation, special functions, Fast Fourier transform, signal processing and image processing, ordinary differential equation, and other computations commonly used in science and engineering.

You may use

```
import scipy.stats as st
```

how to use

Official tutorial

matplotlib(plot)

"Matplotlib is a comprehensive library for creating static, animated, and interactive visualizations in Python."
matplotlib website

how to use

Official tutorial

- tips: for beginners, skip the first tutorial and only read pyplot. I think in this class plot is not so important and we can use a easier way.

basic conda commands

```
conda --version
conda config --show
conda update conda
conda create -n env_name python=python_version
# the follow 3 commands are the same
conda env list
conda info -e
conda info --envs

conda activate env_name
conda deactivate
conda remove --name env_name --all # delete env + all pkgs
conda remove --name env_name  package_name # delete specific pkg
# get env info
conda env export --name myenv > myenv.yml
# create env with info
conda env create -f  myenv.yml

conda list
conda install package_name
conda install package_name=version
conda update package_name
conda uninstall package_name

# change python version
conda install python=version

conda update python
```