



数据挖掘

Data Mining

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廈門大學
XIAMEN UNIVERSITY



Python基础实验一



Anaconda



实验任务



结果提交

1. Anaconda

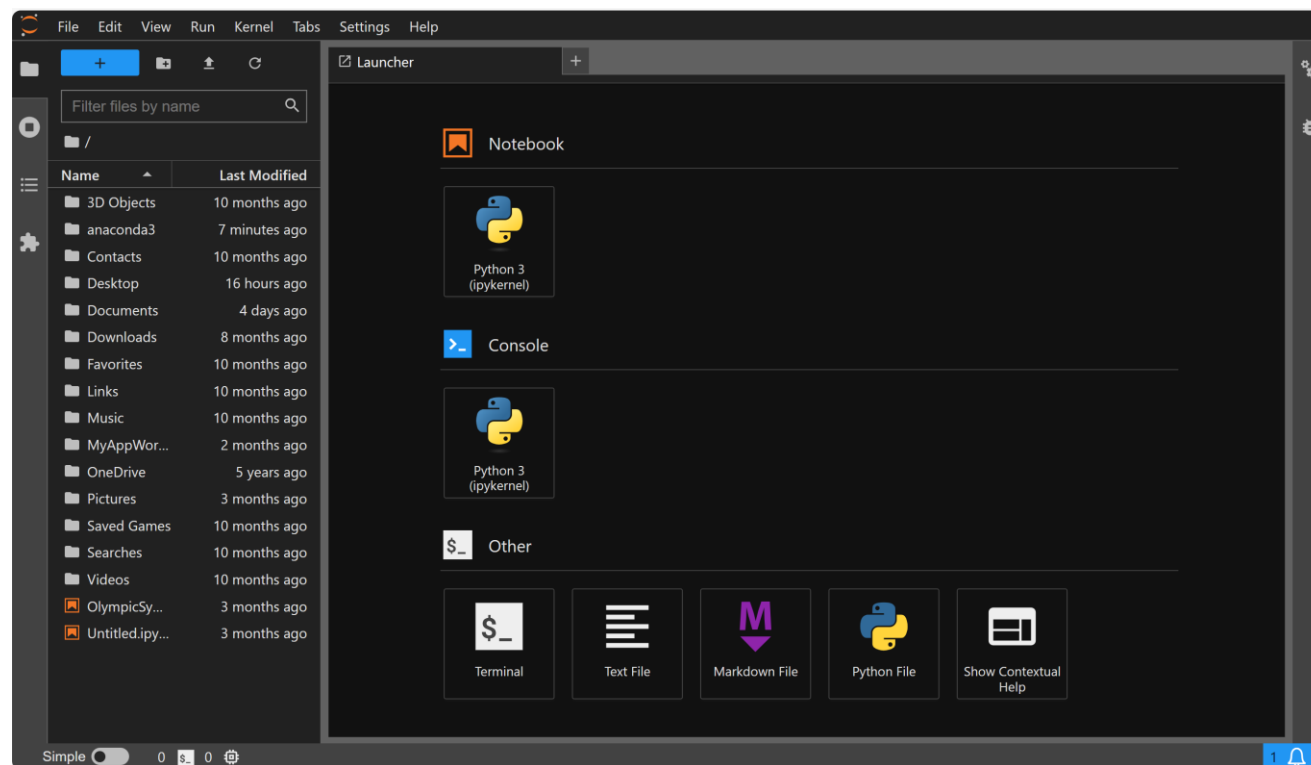
- Anaconda, 中文大蟒蛇, 是一个开源的Python发行版本, 其包含了conda、Python等180多个科学包及其依赖项结合
- 安装: <https://docs.anaconda.com/free/anaconda/install/>



1. Anaconda

JupyterLab

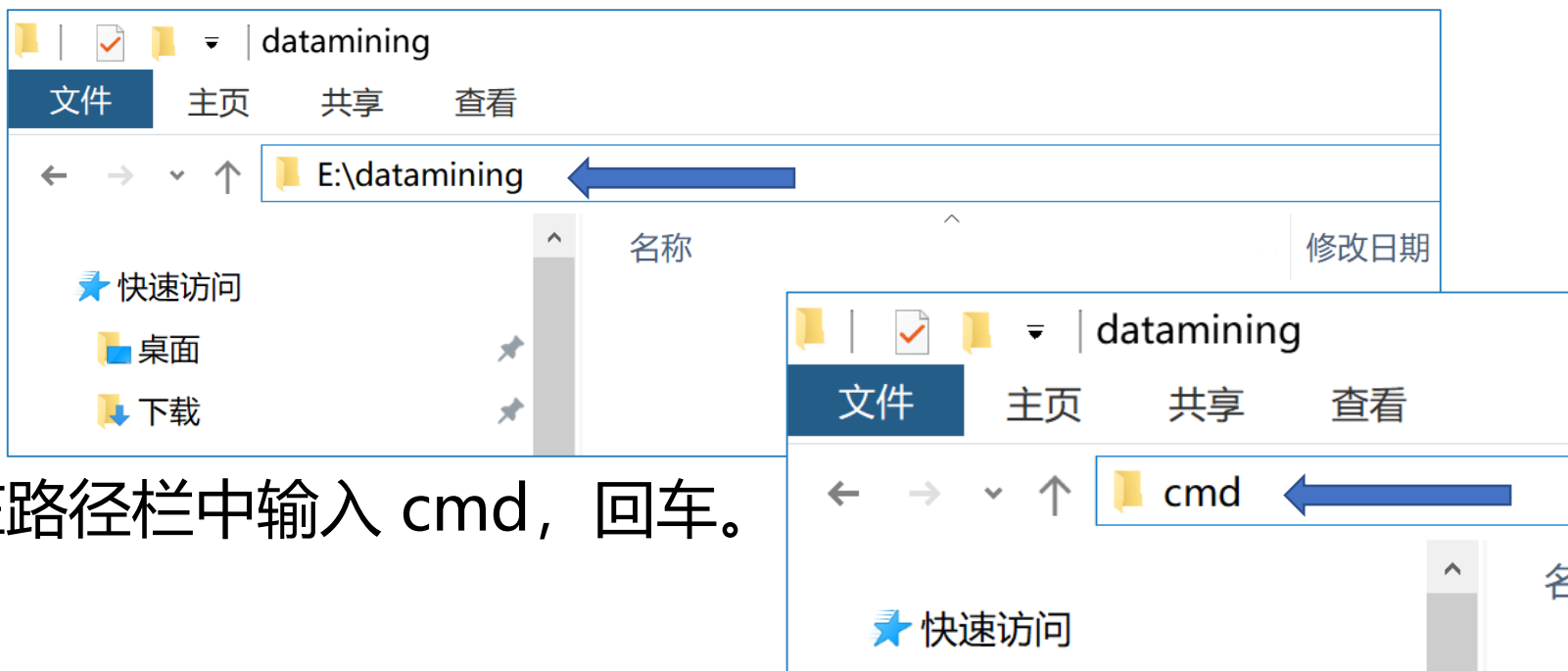
- JupyterLab 是 Jupyter Notebook 的下一代用户界面。它是一个基于 Web 的交互式开发环境，可以让用户以可视化的方式编辑、运行和分享代码。



1. Anaconda

JupyterLab

- 选定要存放Jupyter源文件的目录（比如：E:\datamining）。
- 在文件资源管理器中打开该目录。

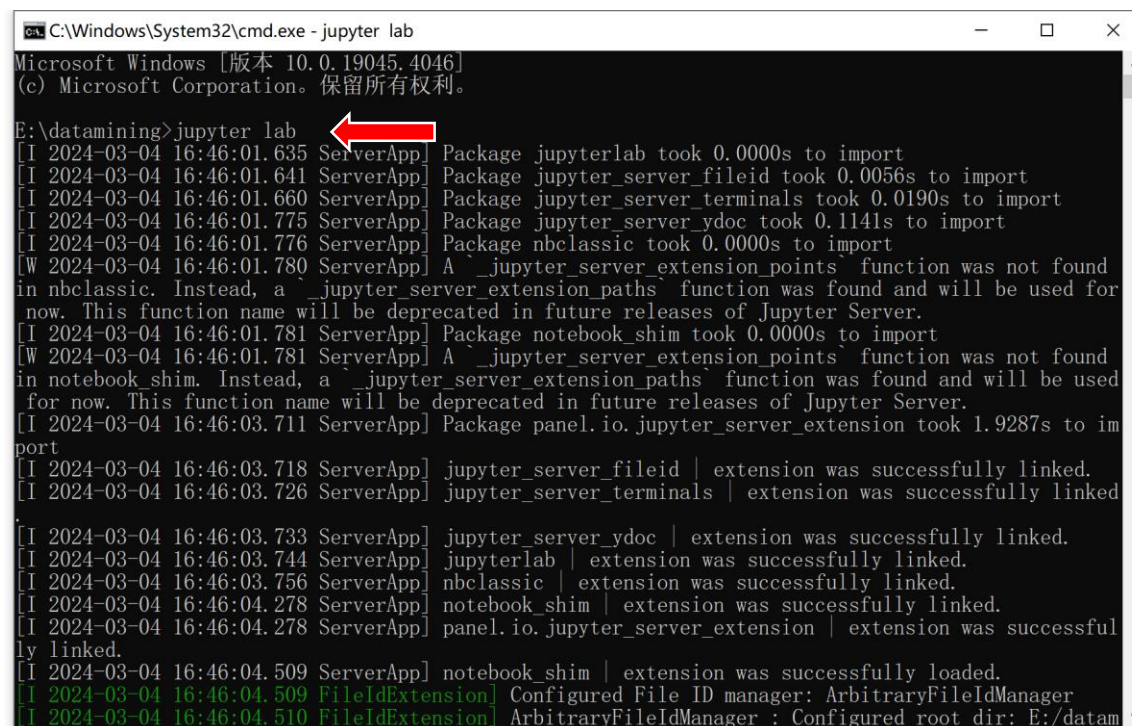


- 在路径栏中输入 cmd，回车。

1. Anaconda

JupyterLab

- 在弹出的界面光标处输入 jupyter lab，回车。
- 服务启动成功，**浏览器**中出现JupyterLab界面。



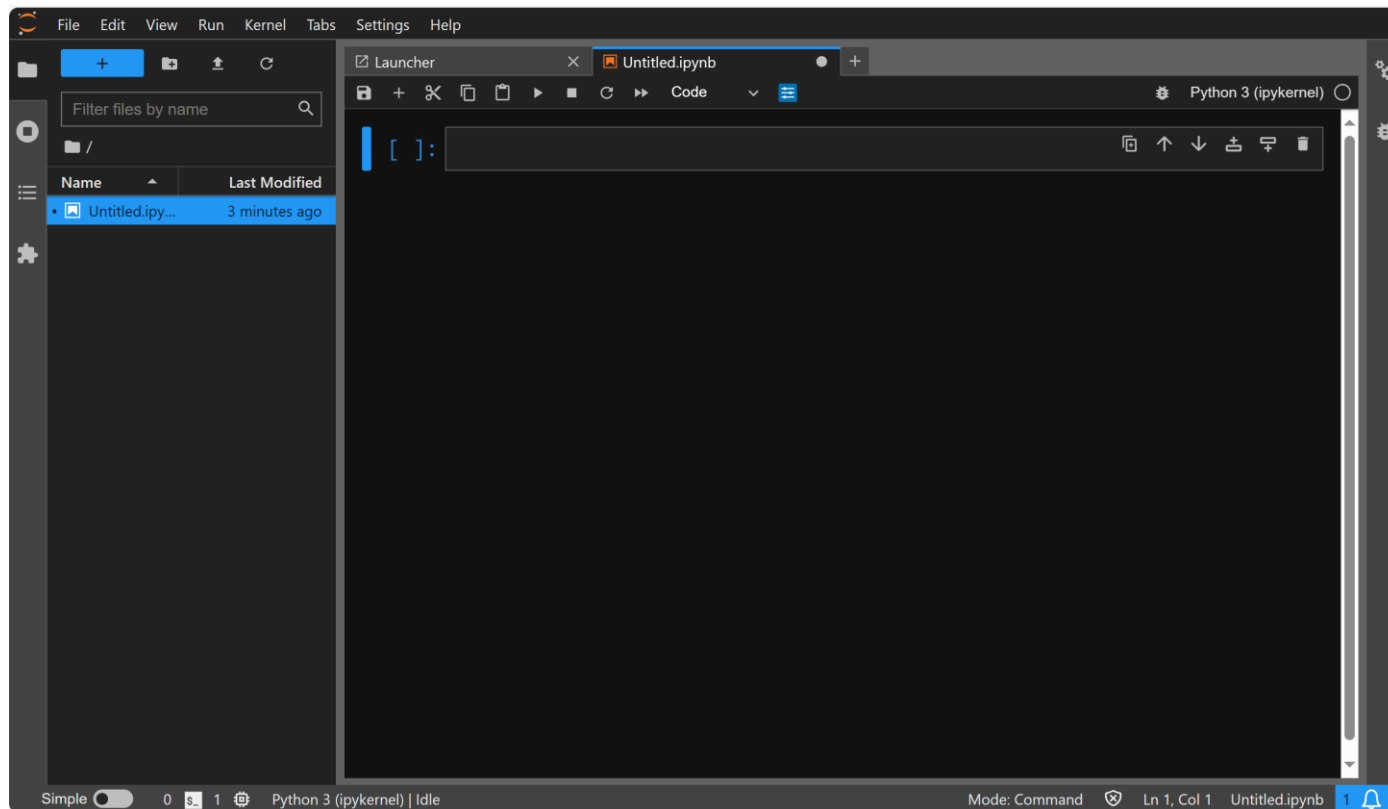
```
C:\Windows\System32\cmd.exe - jupyter lab
Microsoft Windows [版本 10.0.19045.4046]
(c) Microsoft Corporation. 保留所有权利。

E:\datamining>jupyter lab
[I 2024-03-04 16:46:01.635 ServerApp] Package jupyterlab took 0.0000s to import
[I 2024-03-04 16:46:01.641 ServerApp] Package jupyter_server_fileid took 0.0056s to import
[I 2024-03-04 16:46:01.660 ServerApp] Package jupyter_server_terminals took 0.0190s to import
[I 2024-03-04 16:46:01.775 ServerApp] Package jupyter_server_ydoc took 0.1141s to import
[I 2024-03-04 16:46:01.776 ServerApp] Package nbclassic took 0.0000s to import
[W 2024-03-04 16:46:01.780 ServerApp] A `_jupyter_server_extension_points` function was not found
in nbclassic. Instead, a `_jupyter_server_extension_paths` function was found and will be used for
now. This function name will be deprecated in future releases of Jupyter Server.
[I 2024-03-04 16:46:01.781 ServerApp] Package notebook_shim took 0.0000s to import
[W 2024-03-04 16:46:01.781 ServerApp] A `_jupyter_server_extension_points` function was not found
in notebook_shim. Instead, a `_jupyter_server_extension_paths` function was found and will be used
for now. This function name will be deprecated in future releases of Jupyter Server.
[I 2024-03-04 16:46:03.711 ServerApp] Package panel.io.jupyter_server_extension took 1.9287s to im
port
[I 2024-03-04 16:46:03.718 ServerApp] jupyter_server_fileid | extension was successfully linked.
[I 2024-03-04 16:46:03.726 ServerApp] jupyter_server_terminals | extension was successfully linked
.
[I 2024-03-04 16:46:03.733 ServerApp] jupyter_server_ydoc | extension was successfully linked.
[I 2024-03-04 16:46:03.744 ServerApp] jupyterlab | extension was successfully linked.
[I 2024-03-04 16:46:03.756 ServerApp] nbclassic | extension was successfully linked.
[I 2024-03-04 16:46:04.278 ServerApp] notebook_shim | extension was successfully linked.
[I 2024-03-04 16:46:04.278 ServerApp] panel.io.jupyter_server_extension | extension was successfu
ly linked.
[I 2024-03-04 16:46:04.509 ServerApp] notebook_shim | extension was successfully loaded.
[I 2024-03-04 16:46:04.509 FileIdExtension] Configured File ID manager: ArbitraryFileManager
[I 2024-03-04 16:46:04.510 FileIdExtension] ArbitraryFileManager : Configured root dir: E:/datam
```


1. Anaconda

JupyterLab

- 点击JupyterLab界面中的 Notebook 下的 Python 3图标。



1. Anaconda

JupyterLab

■ 在线帮助: <https://jupyterlab.readthedocs.io/en/stable/>

The screenshot displays the JupyterLab web application interface. On the left is a file browser sidebar with a search bar and a list of files and folders. The main area is divided into several panes:

- Launcher:** Shows open tabs including README.md, Lorenz.ipynb, Terminal 1, Console 1, and Data.ipynb.
- Code Editor:** Displays the code for Lorenz.ipynb, which includes an interactive widget for the Lorenz attractor parameters.
- Output View:** Shows the output of the code, including the same interactive widget and a 3D plot of the Lorenz attractor.
- lorenz.py:** A separate pane showing the source code for the Lorenz attractor simulation.

The file browser sidebar lists the following files and folders:

Name	Last Modified
audio	yesterday
images	yesterday
Cpp.ipynb	yesterday
Data.ipynb	yesterday
Fasta.ipynb	yesterday
Julia.ipynb	yesterday
Lorenz.ip...	yesterday
lorenz.py	yesterday
R.ipynb	yesterday

The code editor shows the following code for Lorenz.ipynb:

```
[2]: from lorenz import solve_lorenz
w=interactive(solve_lorenz,sigma=(0.0,50.0),rho=(0.0,50.0))
w
```

The output view shows the same code with interactive sliders for sigma, beta, and rho, and a 3D plot of the Lorenz attractor.

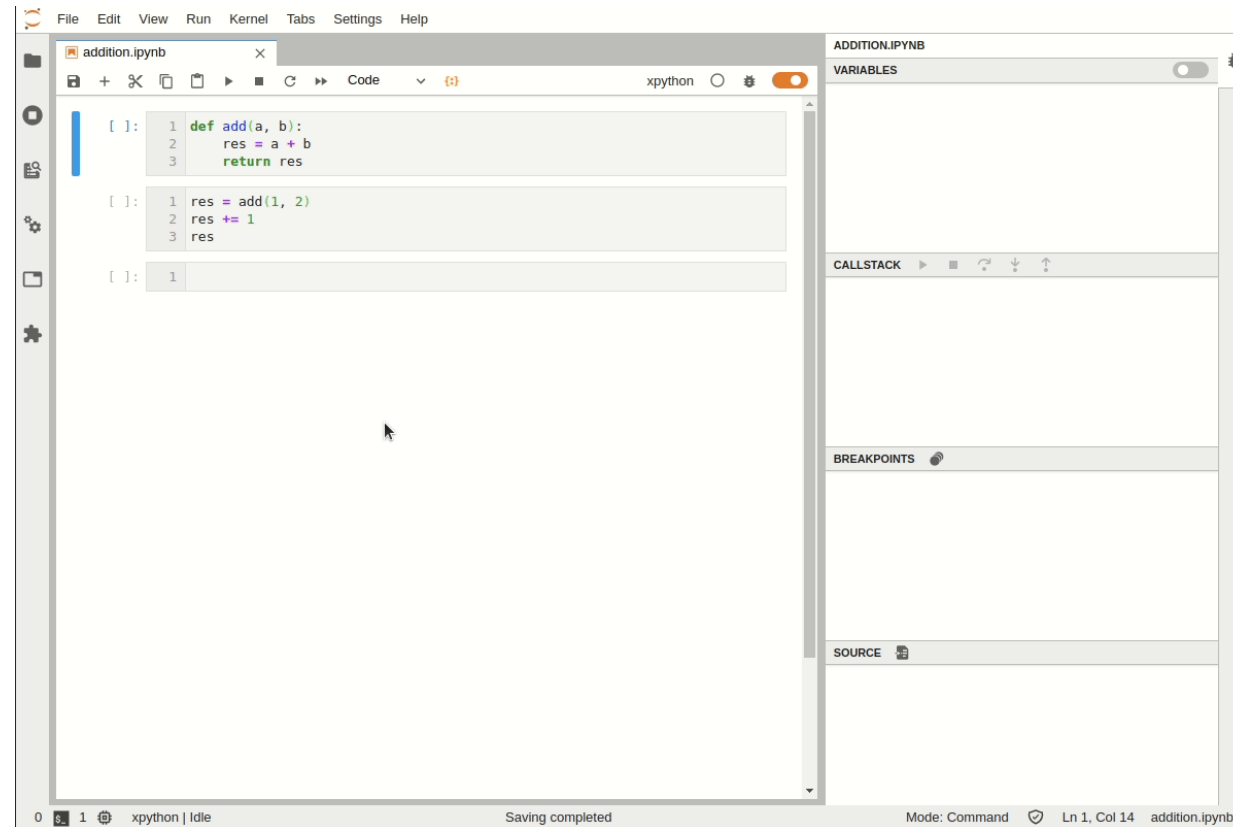
The lorenz.py file contains the following code:

```
1 from matplotlib import pyplot as plt
2 from mpl_toolkits.mplot3d import Axes3D
3 import numpy as np
4 from scipy import integrate
5
6 def solve_lorenz(sigma=10.0, beta=8./3, rho=28.0):
7     """Plot a solution to the Lorenz differential
8     equations."""
9
10     max_time = 4.0
11     N = 30
12
13     fig = plt.figure()
14     ax = fig.add_axes([0, 0, 1, 1], projection='3d')
15     ax.axis('off')
```

1. Anaconda

JupyterLab

■ Debug: <https://jupyterlab.readthedocs.io/en/stable/user/debugger.html>





Anaconda



实验任务



结果提交

2. 实验任务

自主学习

- 1.1 Python介绍
- 1.2 常见数据结构和基本语句
- 1.3 函数和模块
- 1.4 异常处理
- 1.5 文件读写

2. 实验任务

实验作业

- 完成 “学号-姓名 python基础实验1.ipynb” 中的实验作业



Anaconda



实验任务



结果提交

3. 结果提交

提交要求

- 补充 “学号-姓名 python基础实验1.ipynb” 文件名中的完整学号与完整姓名
- 在该文件中将实验结果（代码或解释）补充完整
- 在Int课程平台中提交该文件
- 截至时间：2024.03.14 00:00
- 请注意：不接收迟交作业！要独立完成，不允许抄袭！