



图机器学习实验

lab1: 实验环境搭建

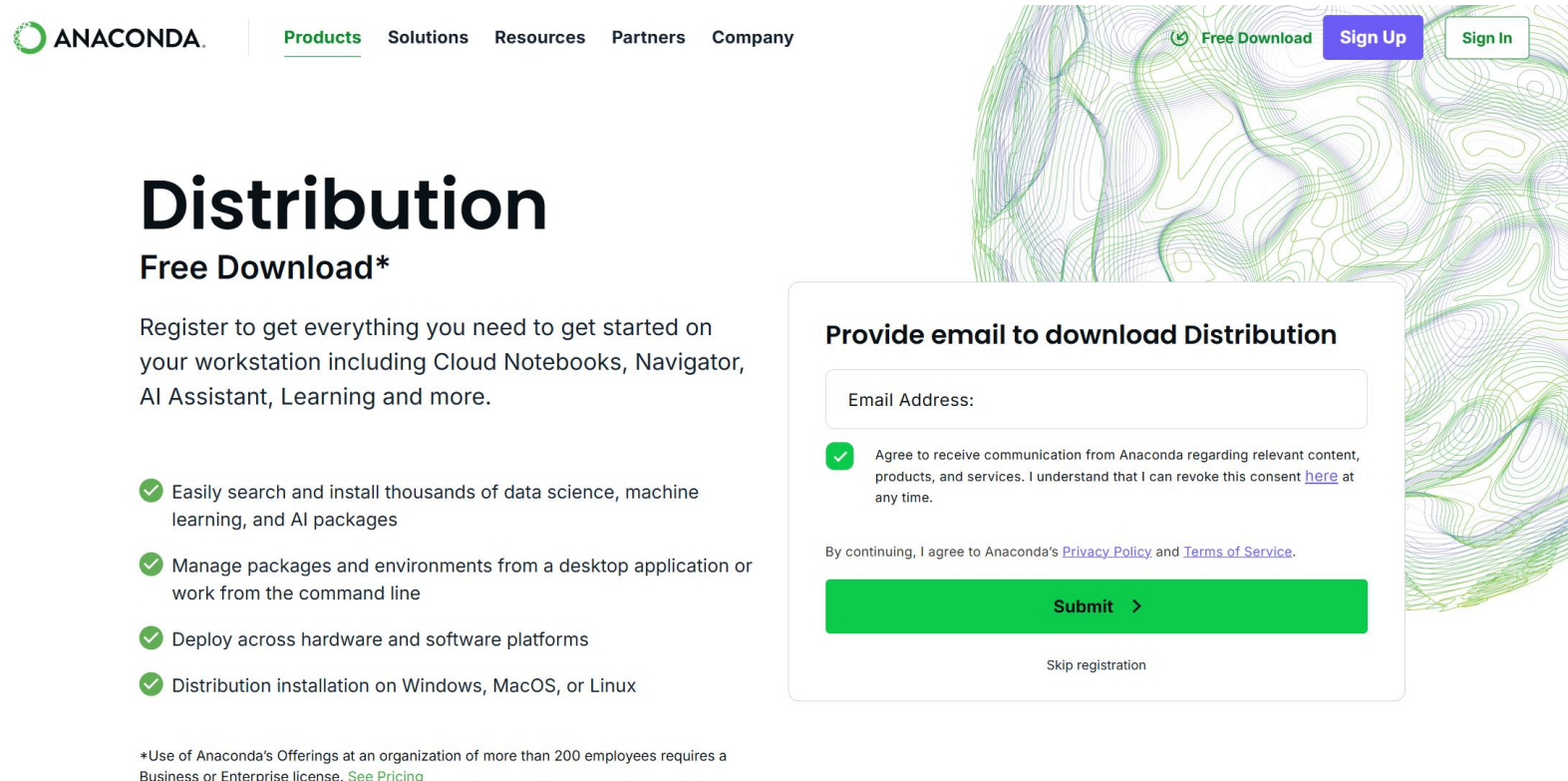
授课老师: 娄坚 李丹



- 1. anaconda安装
- 2. 实验内容演示

■ 1. anaconda安装

[anaconda](https://www.anaconda.com/download): <https://www.anaconda.com/download>



The screenshot displays the Anaconda website's 'Distribution' page. The header includes the Anaconda logo and navigation links: Products, Solutions, Resources, Partners, and Company. The main heading is 'Distribution' with a subheading 'Free Download*'. Below this, a paragraph states: 'Register to get everything you need to get started on your workstation including Cloud Notebooks, Navigator, AI Assistant, Learning and more.' A list of four benefits follows, each preceded by a green checkmark: 'Easily search and install thousands of data science, machine learning, and AI packages', 'Manage packages and environments from a desktop application or work from the command line', 'Deploy across hardware and software platforms', and 'Distribution installation on Windows, MacOS, or Linux'. At the bottom left, a footnote reads: '*Use of Anaconda's Offerings at an organization of more than 200 employees requires a Business or Enterprise license. See Pricing'. On the right side, a registration form titled 'Provide email to download Distribution' is overlaid. It contains an 'Email Address:' input field, a checked checkbox for agreeing to communication, and a green 'Submit >' button. A link to 'Skip registration' is located below the button. The background of the website features a green and white abstract pattern.

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■ 1. anaconda安装

[anaconda](https://www.anaconda.com/download): <https://www.anaconda.com/download>

Download Now

For installation assistance, refer to [Troubleshooting](#).

Download Anaconda Distribution or [Miniconda](#) by choosing the proper installer for your machine. Learn the difference from our [Documentation](#).



Anaconda Installers

 Download



Windows

Python 3.12

↓ 64-Bit Graphical Installer
(912.3M)



Mac

Python 3.12

↓ 64-Bit (Apple silicon) Graphical
Installer (704.7M)



Linux

Python 3.12

↓ 64-Bit (x86) Installer (1007.9M)

■ 1. anaconda安装

[anaconda](https://www.anaconda.com/download): <https://www.anaconda.com/download>

注意：PYG可用的python版本为3.9-3.13

<https://pytorch-geometric.readthedocs.io/en/latest/install/installation.html>

Installation

 PyG is available for  Python 3.9 to  Python 3.13.

Note

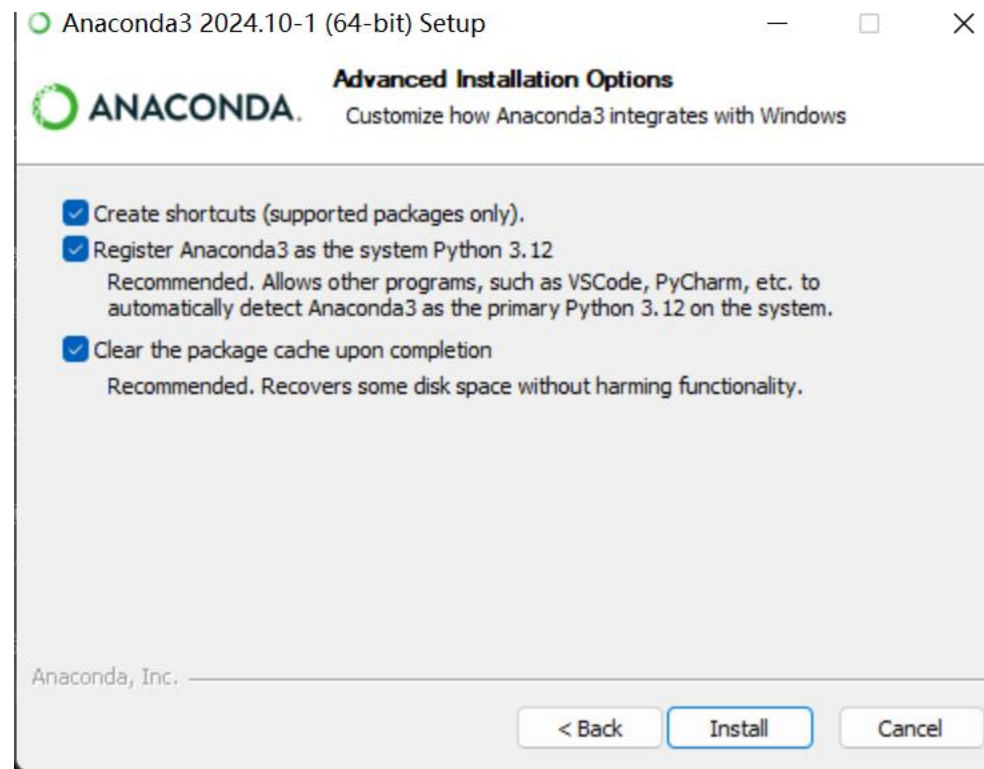
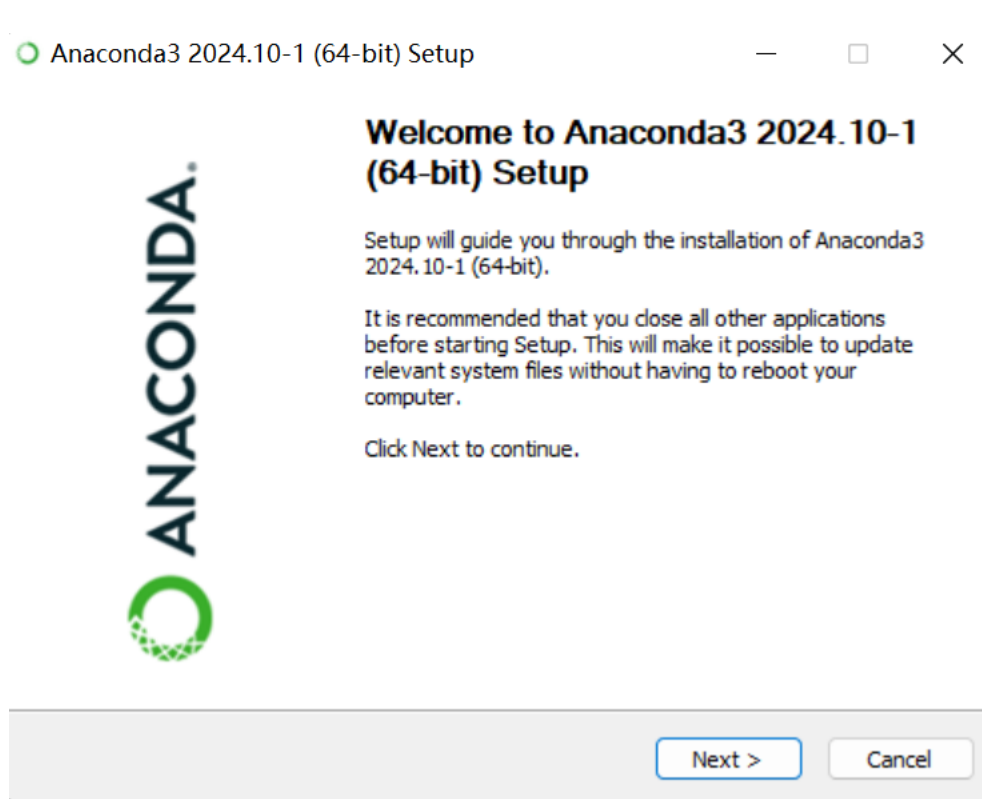
We do not recommend installation as a root user on your system  Python. Please setup a virtual environment, e.g., via [venv](#),  [Anaconda/Miniconda](#), or create a [Docker image](#).

本次课程内容



■ 1. anaconda安装

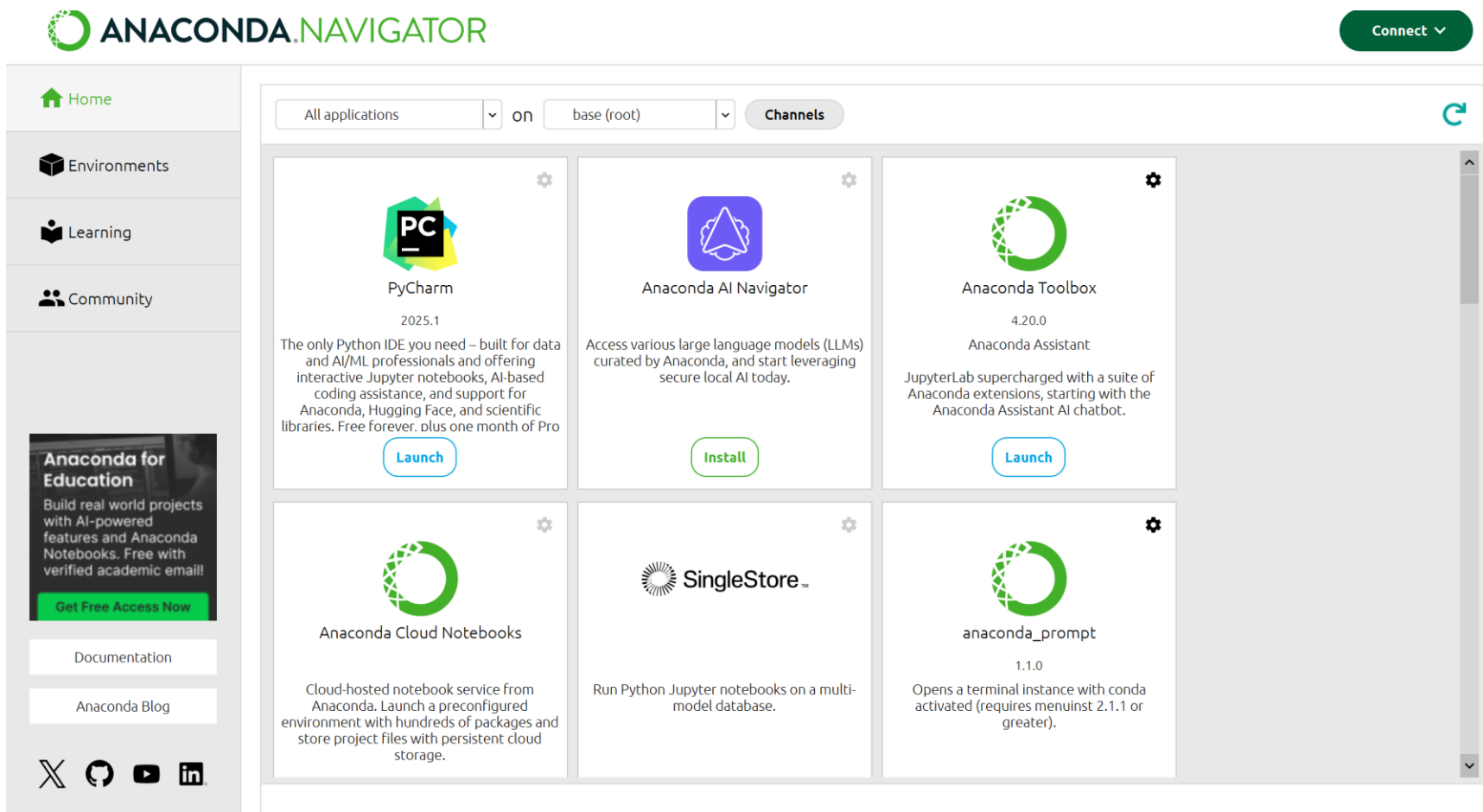
安装界面:



本次课程内容



■ 1. anaconda安装 选择pycharm



本次课程内容



■ 1. anaconda安装

lab0.ipynb

lab0

实验目标

1. 学习如何使用python环境执行图神经网络任务
2. 理解并实现简单的图卷积网络 (GCN)
3. 练习如何使用PyTorch和PyTorch Geometric (PyG) 库处理图数据

实验说明

1. 因为会安装pytorch以及别的库，推荐大家在自己的电脑上配置环境
2. 实验0旨在帮助大家熟悉实验环境，并不会打分，我们推荐大家多跑几次，可以尝试做附加内容
3. 做完实验后，请举手通知助教检查实验代码以及问题的输出结果，以便给同学们进行打分
4. 如果大家有疑问尽量在实验课的前60分钟提出，后30分钟主要用于检查同学们的实验结果，可能时间没那么充裕

参考文档：

此处给出官方文档，同样推荐同学们去别的平台如stackoverflow等搜索

1. NetworkX: <https://networkx.org/documentation/stable/tutorial.html>
2. PyG : <https://pytorch-geometric.readthedocs.io/en/latest/>

熟悉NetworkX

NetworkX是最常用的Python包之一，用于创建、操作和挖掘图形

初始化

注意导入之前需要提前安装对应库 (PyG和Networkx)

```
# 导入所需的库
```

选择添加python解释器

Python Interpreter

- conda3.12
- gpt
- tensor2trnsor

Python 3.13

Python 3.12

Add New Interpreter >

Interpreter Settings...

Manage Packages...

Add Local Interpreter...

On SSH...

On Vagrant...

On WSL...

On Docker...

On Docker Compose...

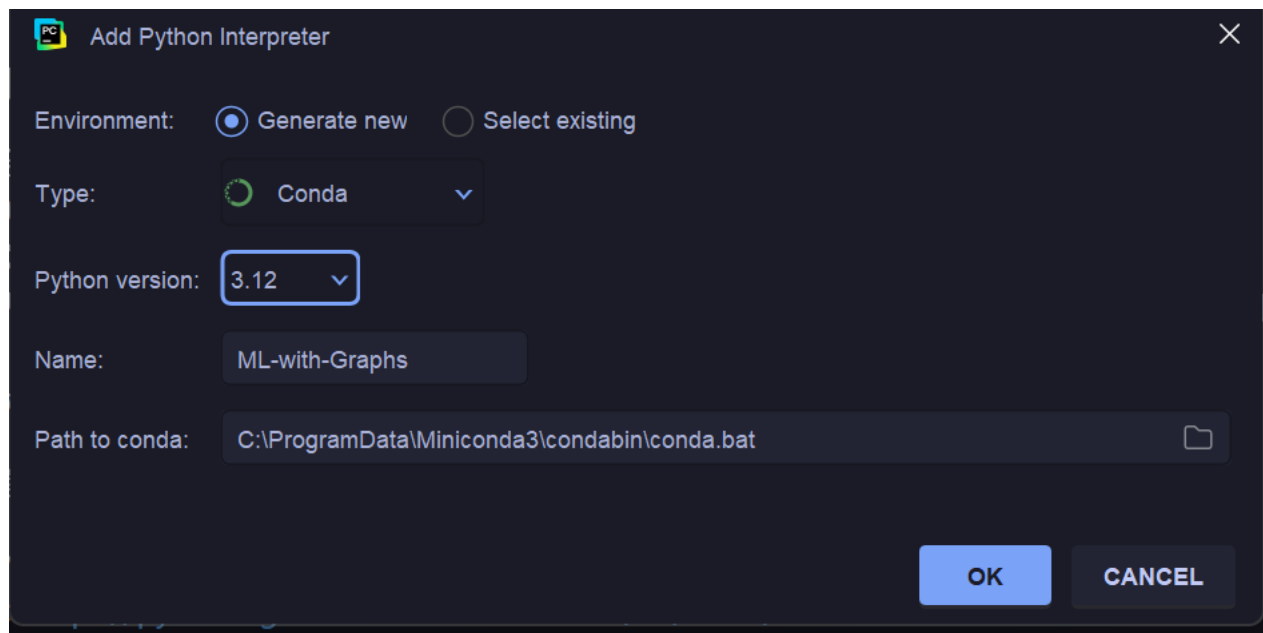
ML-witl 4 spaces conda3.12

本次课程内容



■ 1. anaconda安装

type为Conda, version为3.9-3.12



选择添加python解释器





■ 2. 实验内容展示

本次实验仅进行环境配置，并不会对实验内容打分