

# TEXT MINING

## Lecture 01

### RPYTHON INSTALLATION

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**KEUNGOU I KIM**

*awekim@handong.edu*

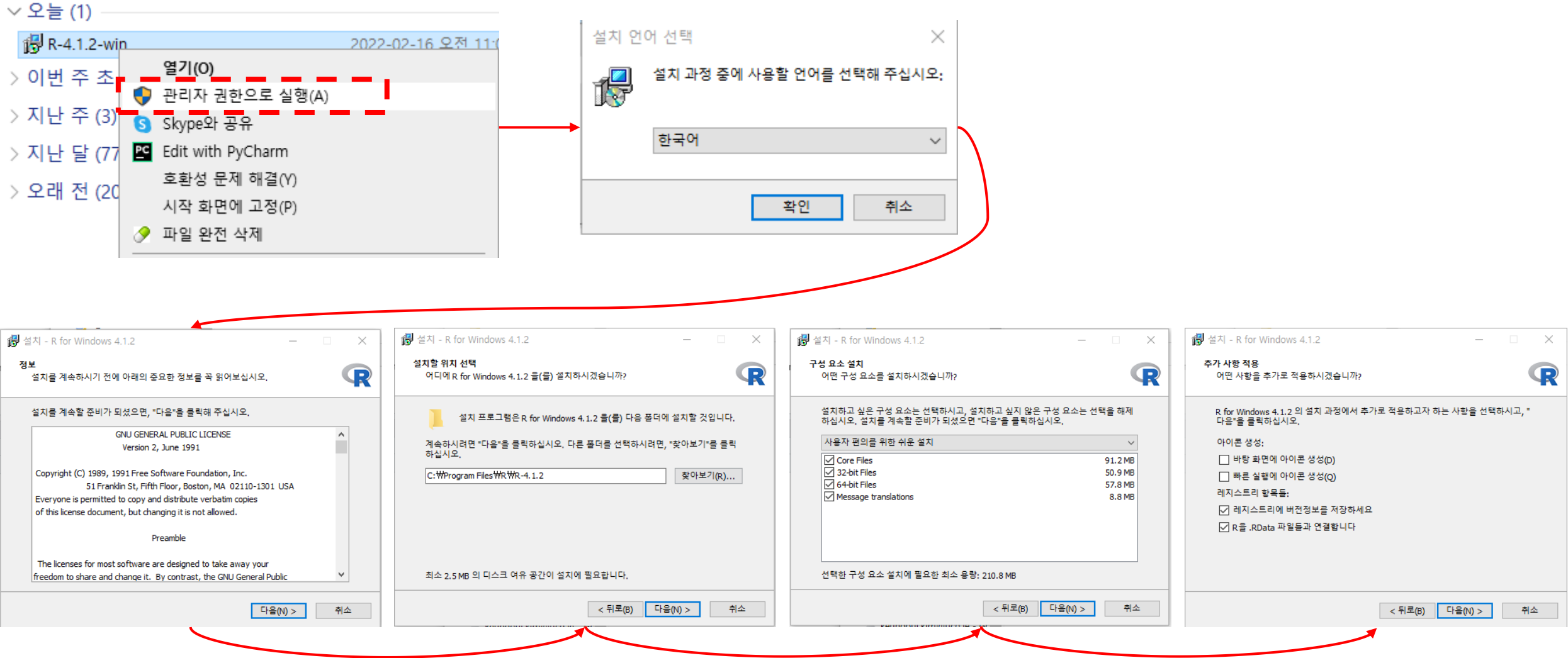


# ***R Installation***

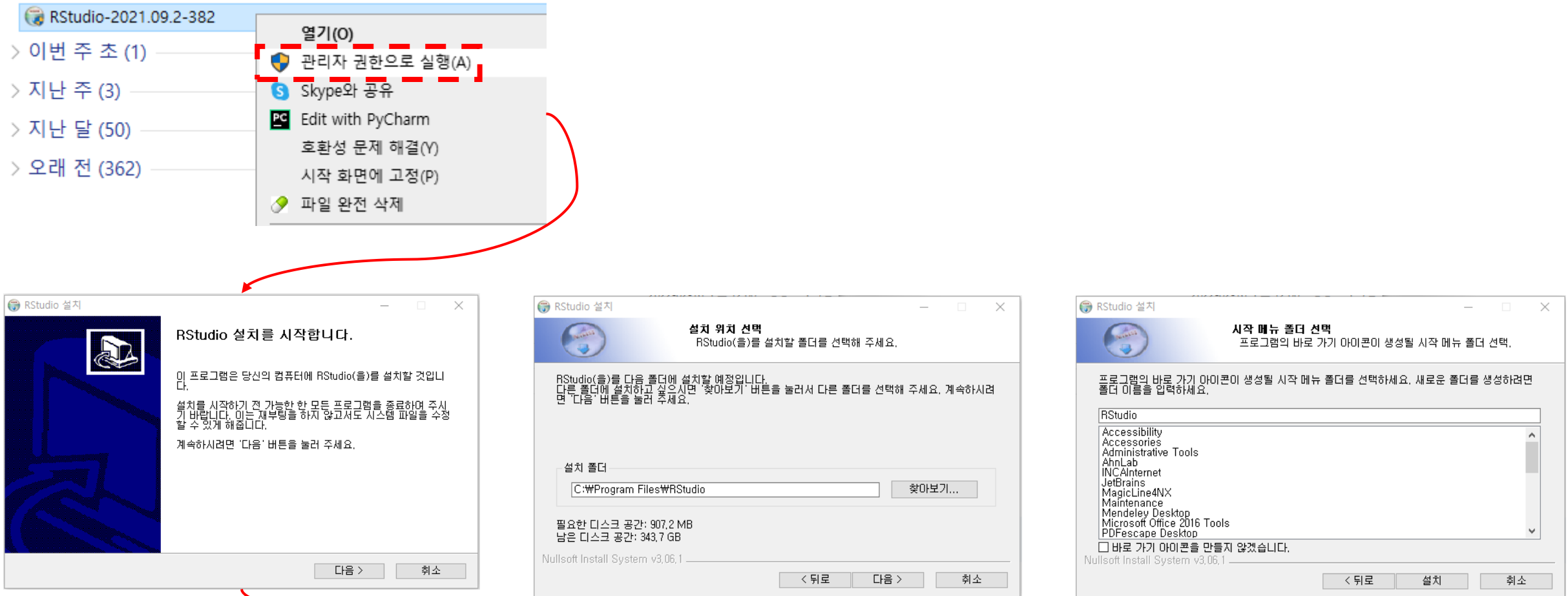
- R
  - Download from <https://cran.r-project.org/bin/windows/base/>
  - (search “download R”)
- R studio
  - Integrated Developing Environment IDE for R
  - Download from <https://www.rstudio.com/products/rstudio/download/>
- R studio server
  - R working environment available from a remote server
  - Accounts are already set up for all enrolled students

- on Windows
  - <https://youtu.be/MFfRQuQKGYg>
- on Mac
  - <https://youtu.be/Ywj6yNfc5nM>
- on Linux
  - (Ubuntu)  
<https://youtu.be/GsuA5ugYqyw>

## • Install with “Run as administrator”



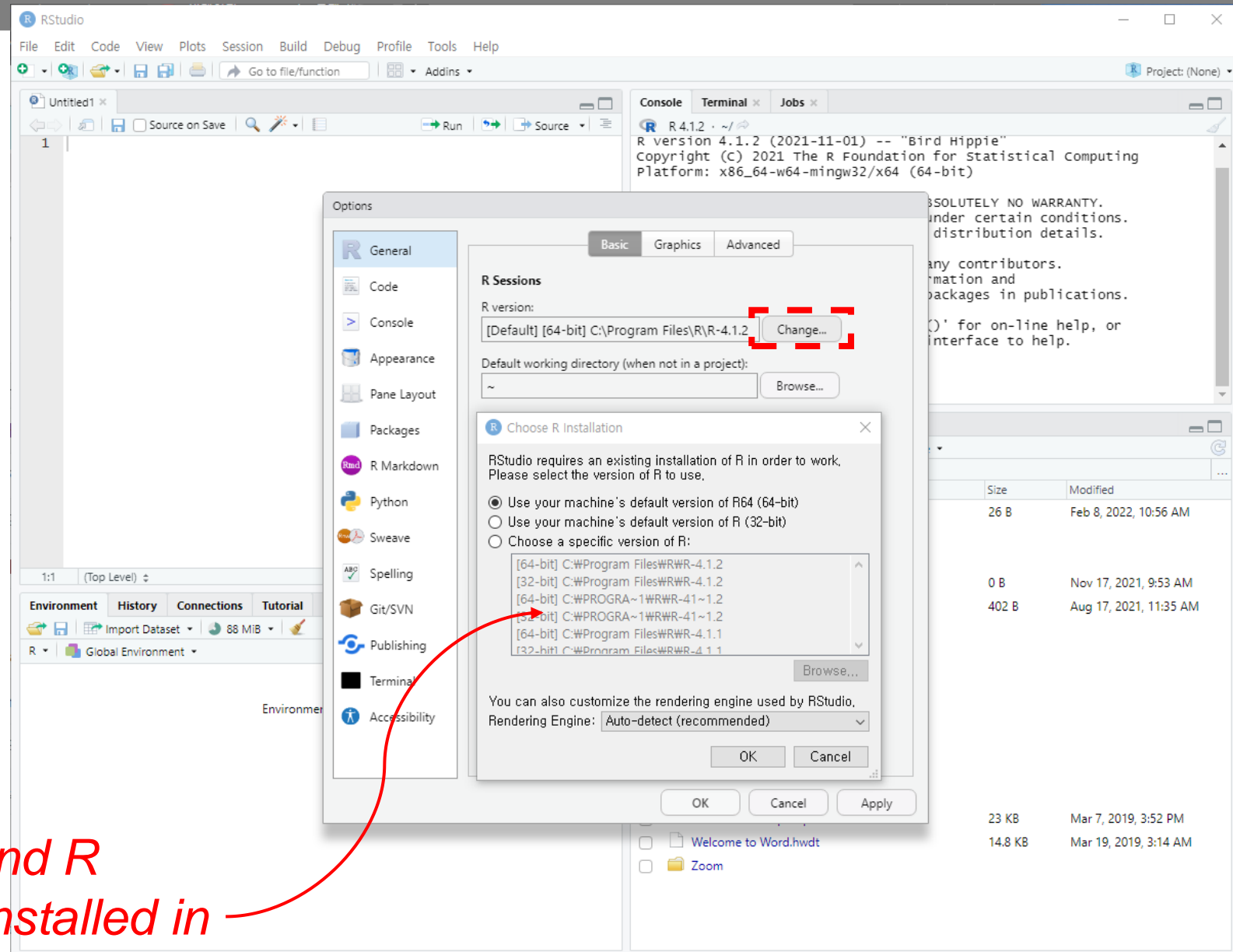
- Install with “Run as administrator”



# Run R & Version Control

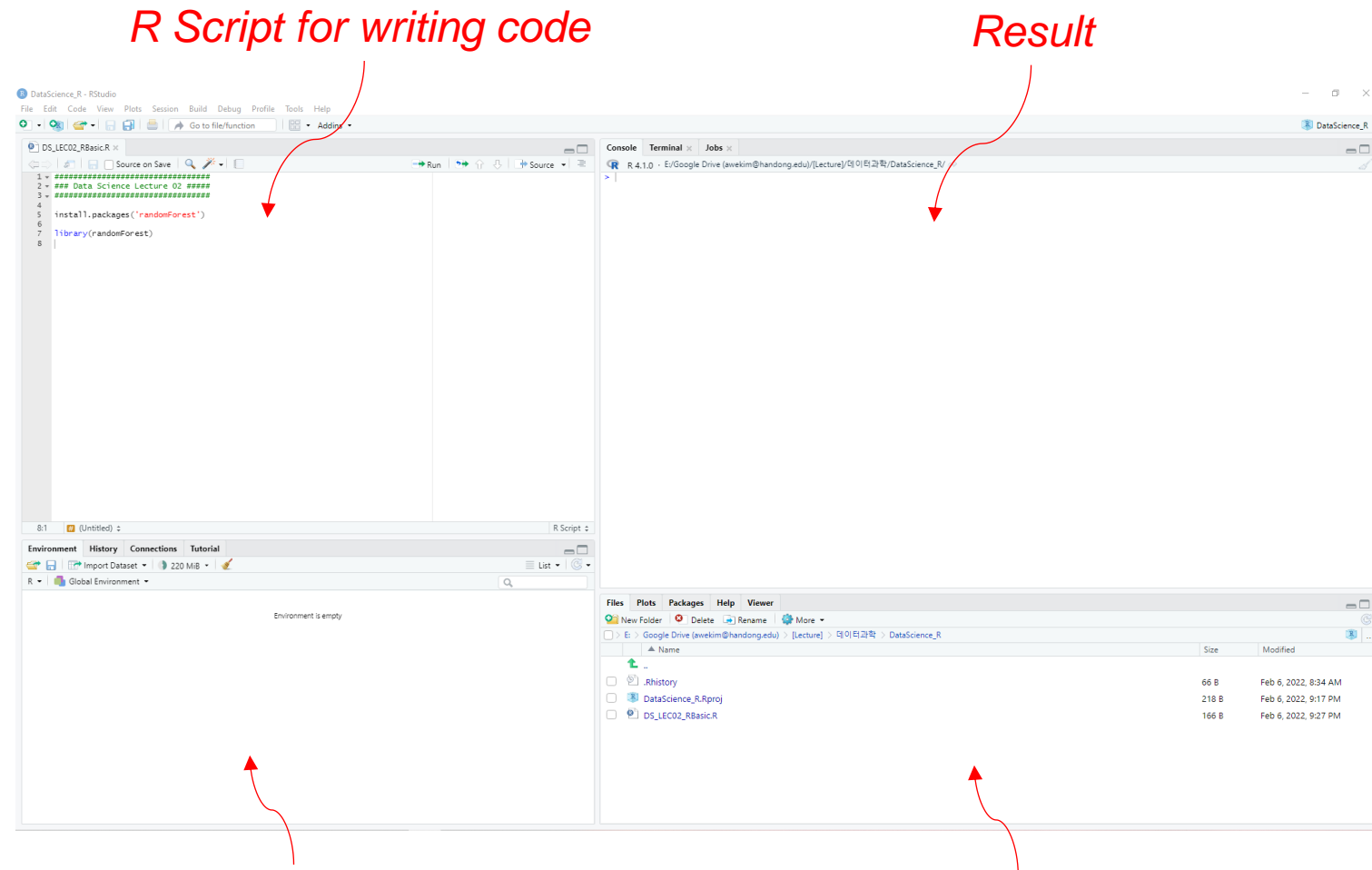
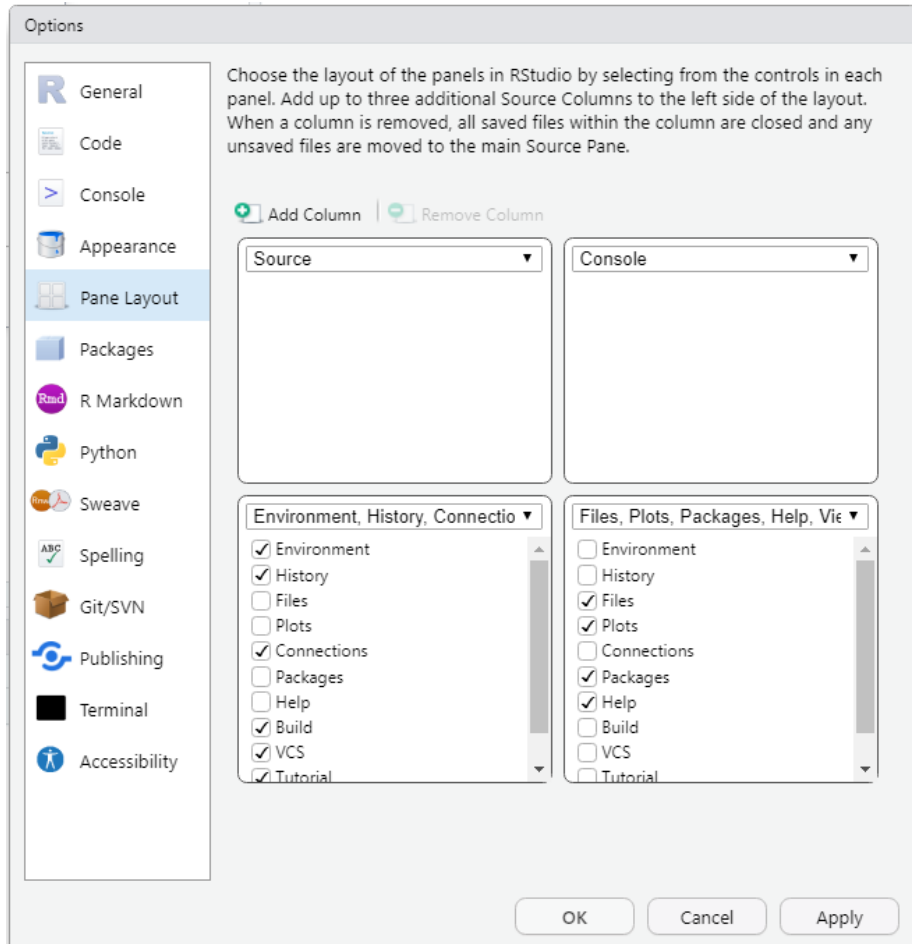
- Run as “Run as administrator”
- Version control
  - Tools → Global Options... → General → R version:
- When using an R package, different versions of R might be required. → Select R versions you wish to use.

*You can find R versions installed in your computer*



# Display Setting

- Tools → Global Option → Pane Layout



# First R exercise

- Try

*Rename File name*

*Description about the code*

```
1- #####
2- ### TextMining Lecture 01 #####
3- ### Subject: RPython Installation #####
4- ### Developed by. KKIM #####
5- #####
6
7 data(women)
8 women
9 plot(women)
10 summary(women)
11
12 print("Hello, world!")
13 seq(1:100)
```

*R codes*



# First R exercise

- Try

```
TextMining_LEC01.R x
Source on Save
Run Source

1- #####
2- ### TextMining Lecture 01 #####
3- ### Subject: RPython Installation #####
4- ### Developed by. KKIM #####
5- #####
6
7 data(women)
8 women
9 plot(women)
10 summary(women)
11
12 print("Hello, world!")
13 seq(1:100)
```

```
> data(women)
> women
      height weight
1         58    115
2         59    117
3         60    120
4         61    123
5         62    126
6         63    129
7         64    132
8         65    135
9         66    139
10        67    142
11        68    146
12        69    150
13        70    154
14        71    159
15        72    164
```

```
> plot(women)
> summary(women)
      height      weight
Min.   :58.0   Min.   :115.0
1st Qu.:61.5   1st Qu.:124.5
Median :65.0   Median :135.0
Mean   :65.0   Mean   :136.7
3rd Qu.:68.5   3rd Qu.:148.0
Max.   :72.0   Max.   :164.0

> print("Hello, world!")
[1] "Hello, world!"


> 1+1
[1] 2
```

- Try

```
> print("Hello, world!")
```

```
[1] "Hello, world!"
```

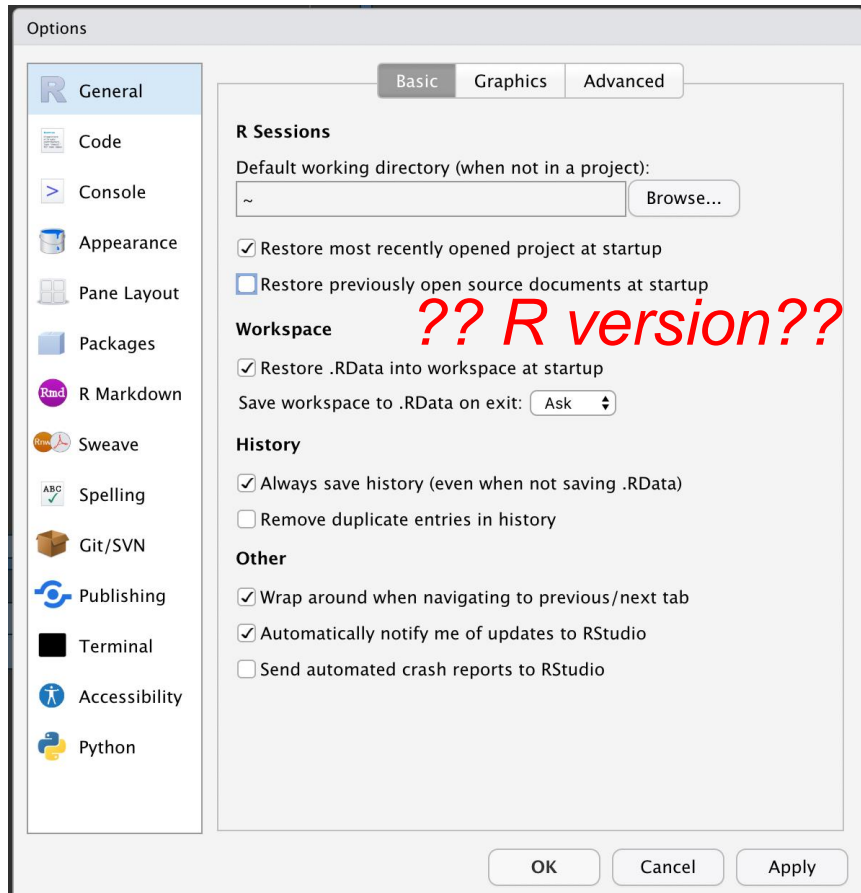
```
> seq(1:100)
```



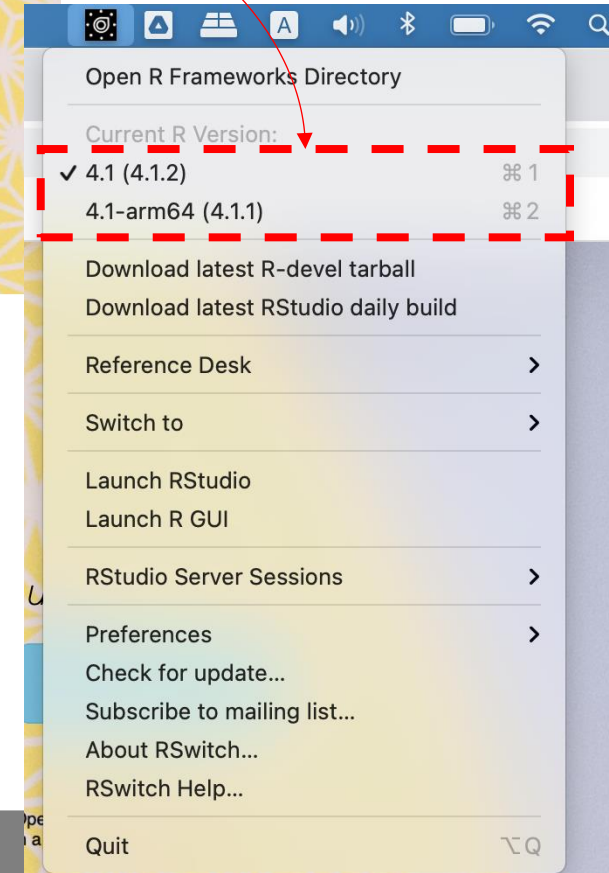
[1]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
[16]	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
[31]	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
[46]	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
[61]	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
[76]	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
[91]	91	92	93	94	95	96	97	98	99	100					

*Index of result*

- Changing R version in Mac
  - <https://rud.is/rswitch/>



?? R version??

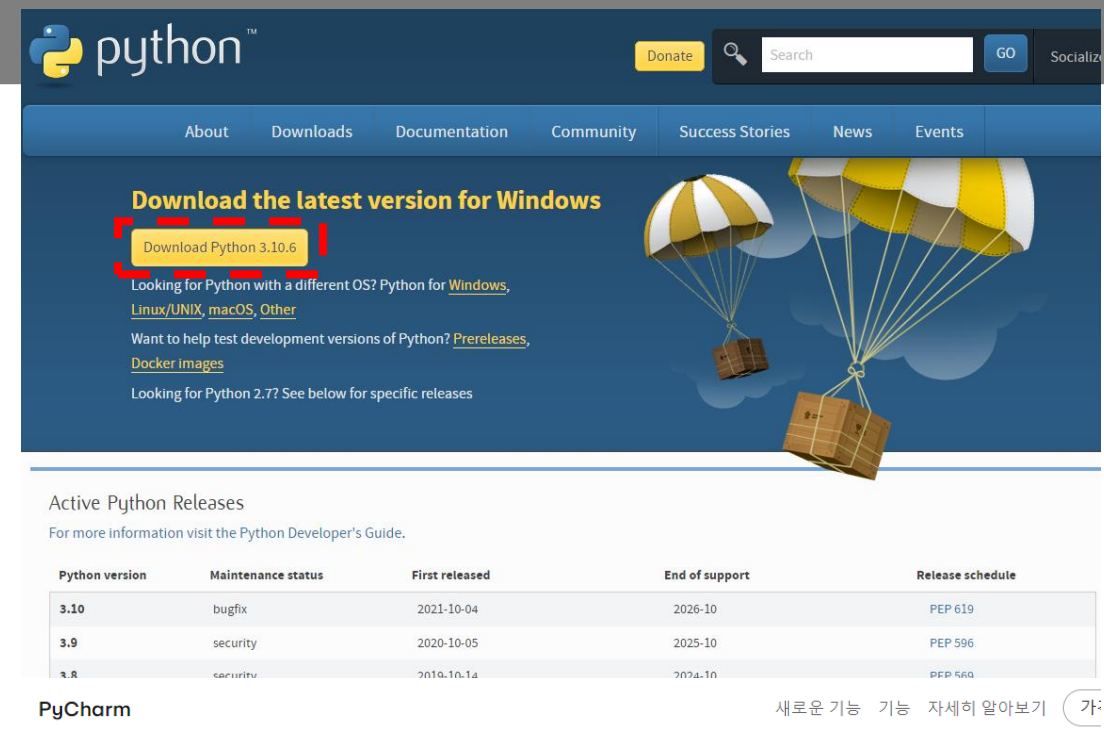


# *Python Installation*

- Python
  - Download from <https://www.python.org/downloads/>
  - (search “download Python”)

## Pycharm

- Community version
- Download from <https://www.jetbrains.com/ko-kr/pycharm/download/#section=windows>



python™

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**Download the latest version for Windows**

**Download Python 3.10.6**

Looking for Python with a different OS? Python for [Windows](#), [Linux/UNIX](#), [macOS](#), [Other](#)

Want to help test development versions of Python? [Prereleases](#), [Docker Images](#)

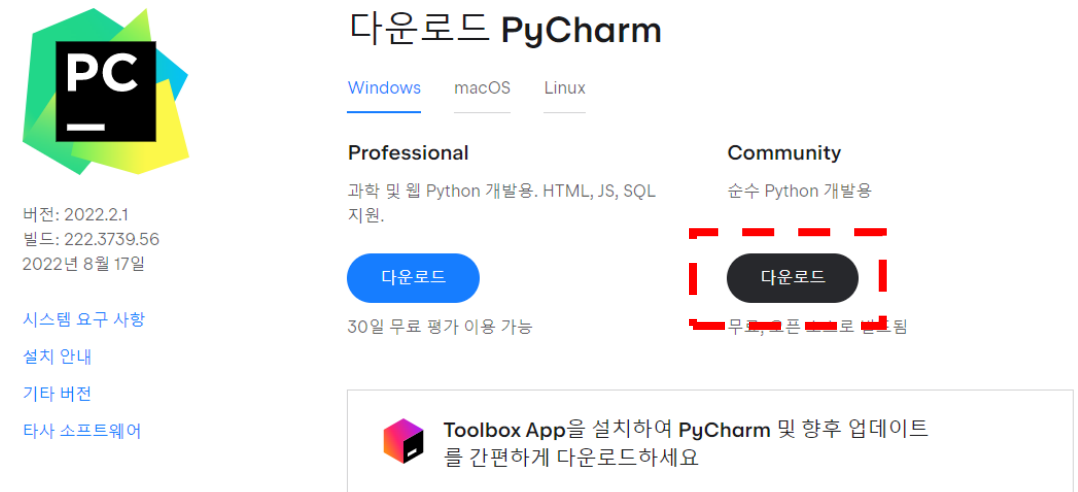
Looking for Python 2.7? See below for specific releases

Active Python Releases

For more information visit the [Python Developer's Guide](#).

Python version	Maintenance status	First released	End of support	Release schedule
3.10	bugfix	2021-10-04	2026-10	PEP 619
3.9	security	2020-10-05	2025-10	PEP 596
3.8	security	2019-10-14	2024-10	PEP 569

PyCharm 새로운 기능 기능 자세히 알아보기



다ownload PyCharm

Windows macOS Linux

**Professional**

과학 및 웹 Python 개발용. HTML, JS, SQL 지원.

**Community**

순수 Python 개발용

**다운로드**

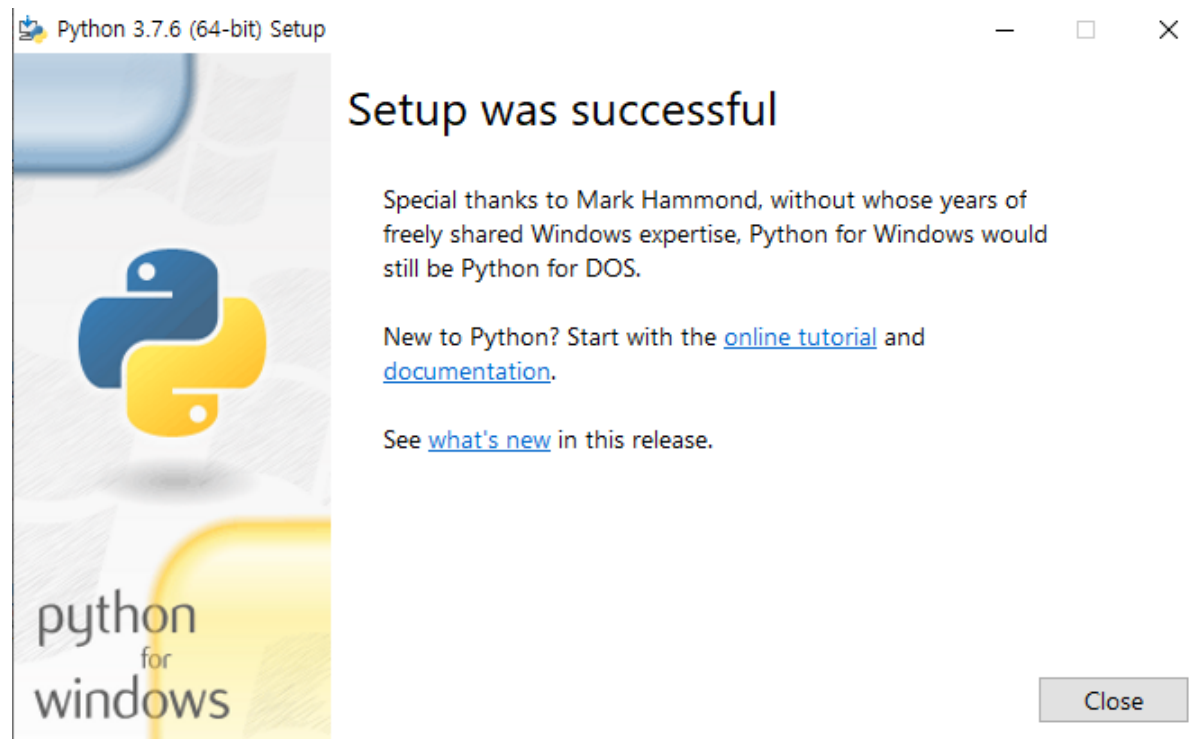
30일 무료 평가 이용 가능

무료, 폰 로 번트됨

Toolbox App을 설치하여 PyCharm 및 향후 업데이트를 간편하게 다운로드하세요

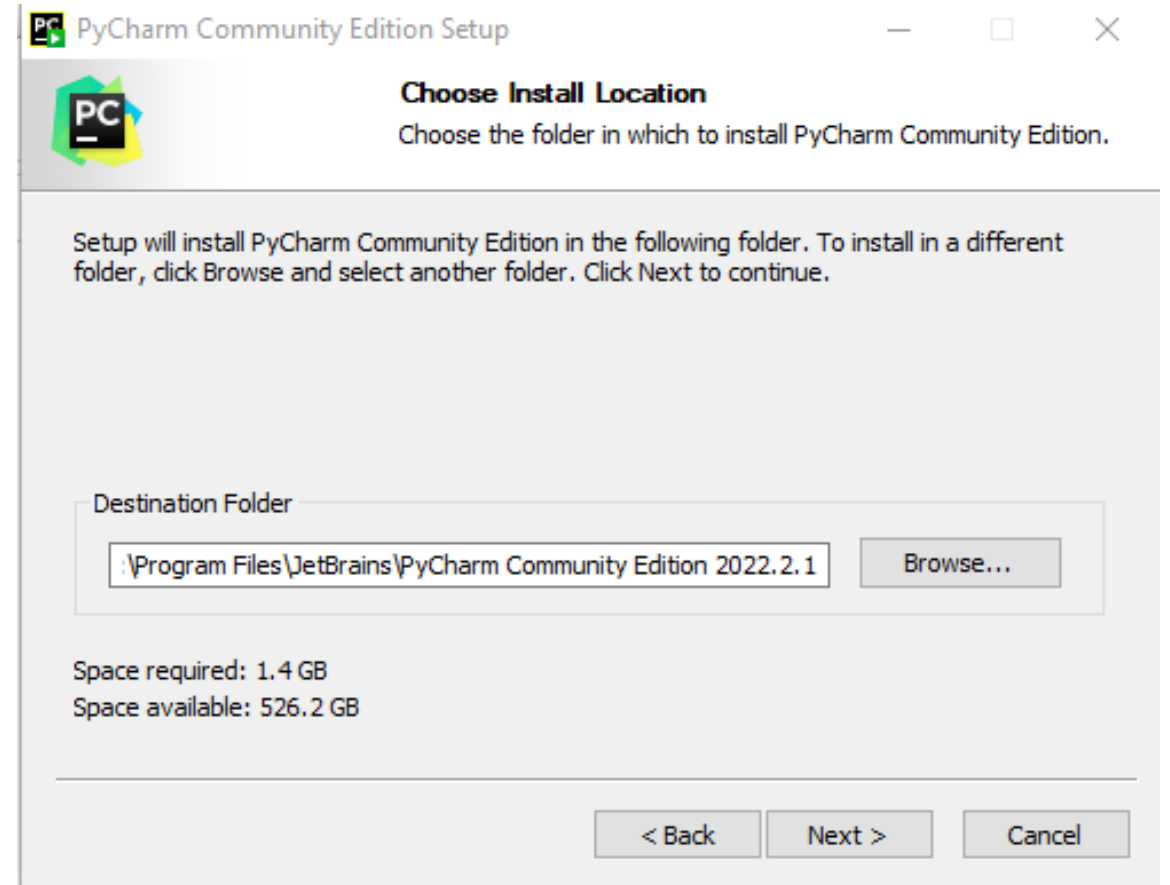
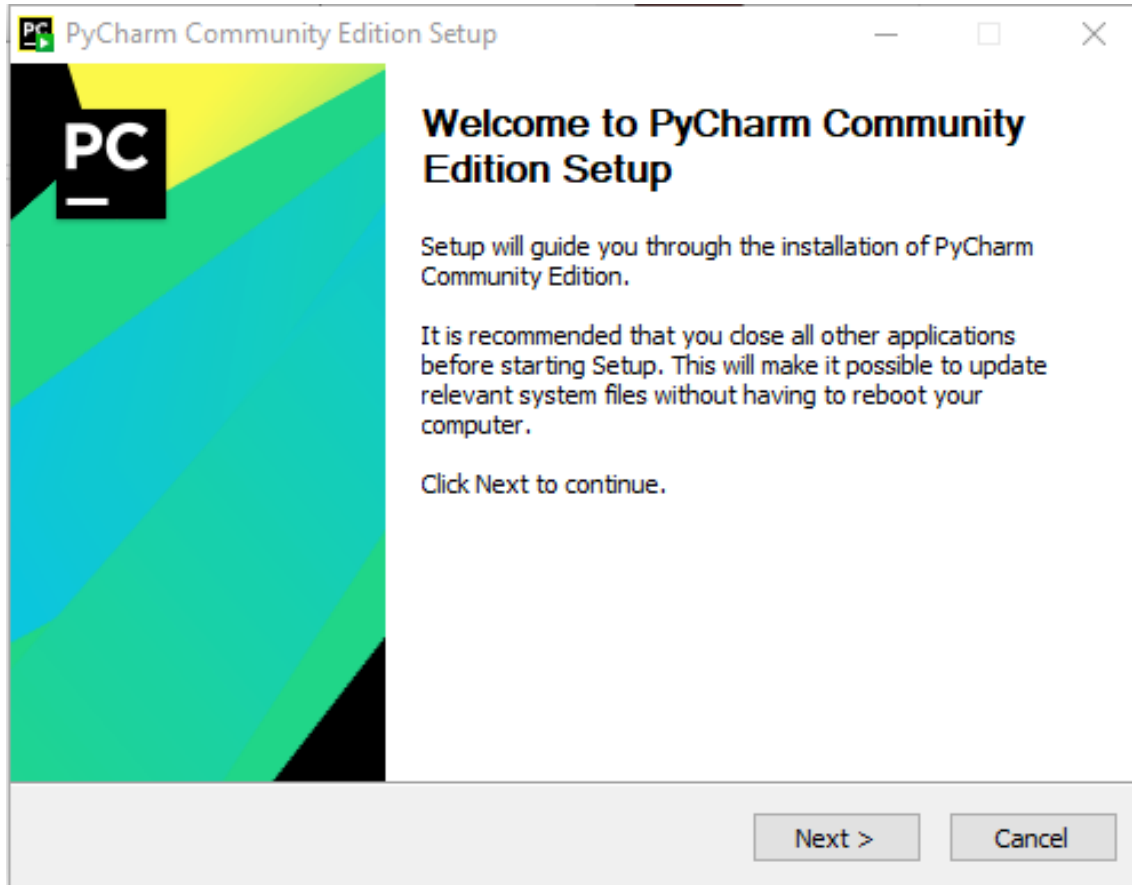
# Install Python

- Install with “Run as administrator”



# Install Pycharm

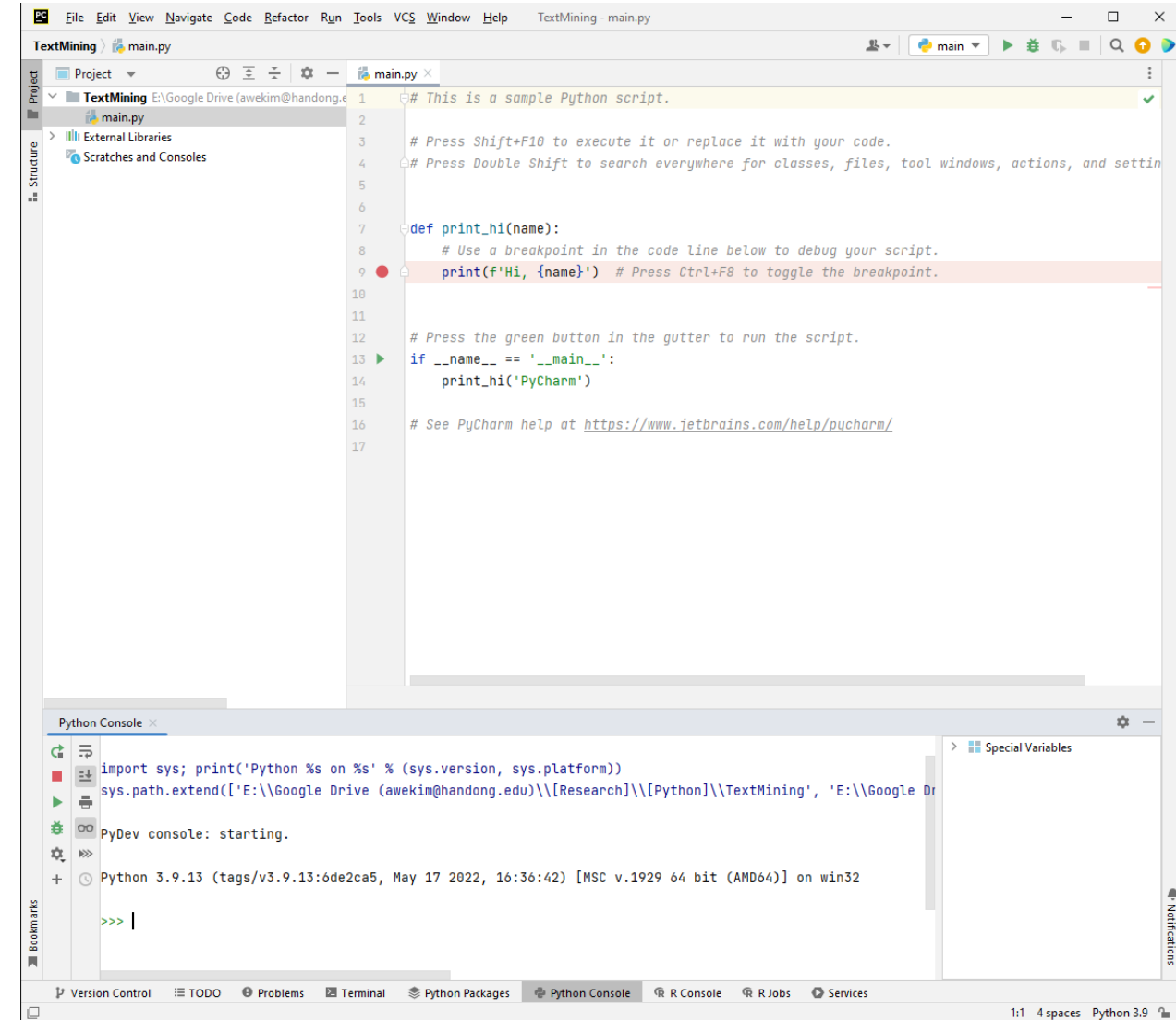
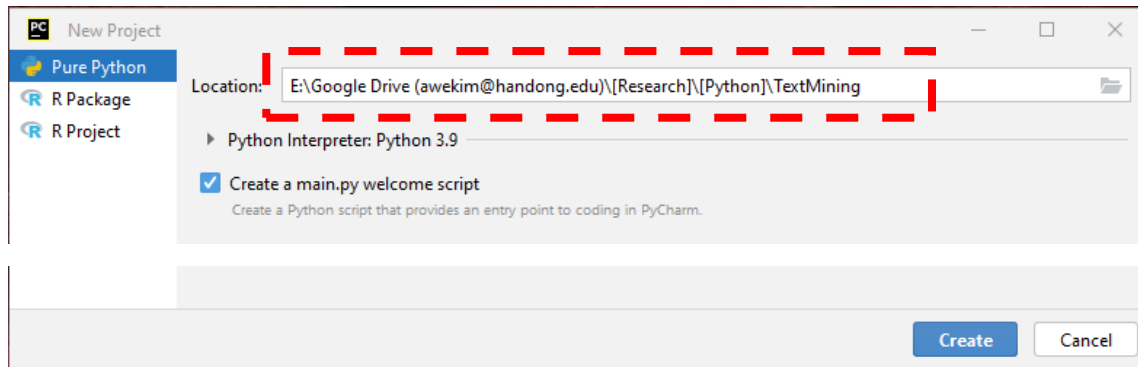
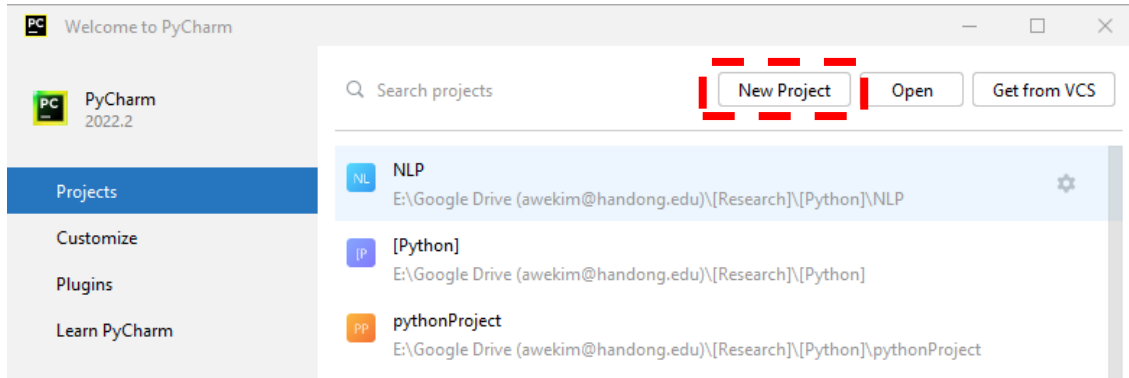
- Install with “Run as administrator”





# Run Python & Version Control

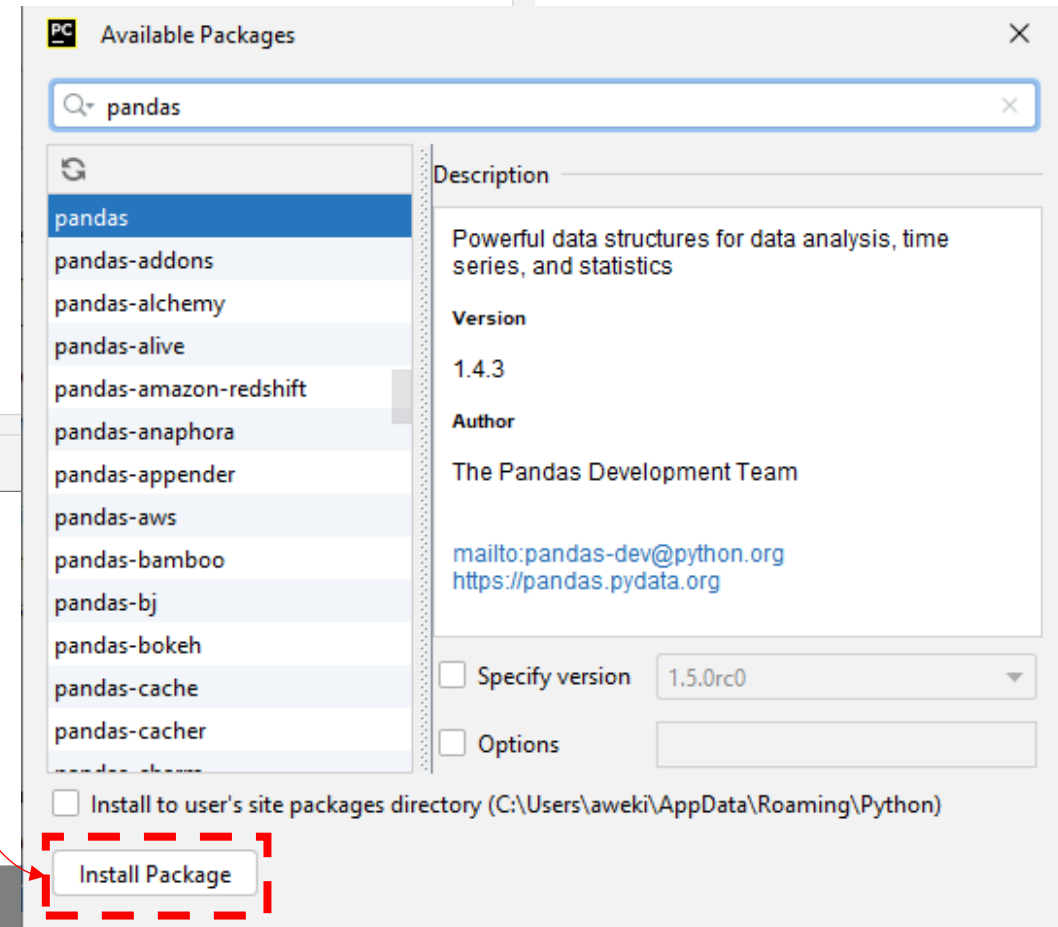
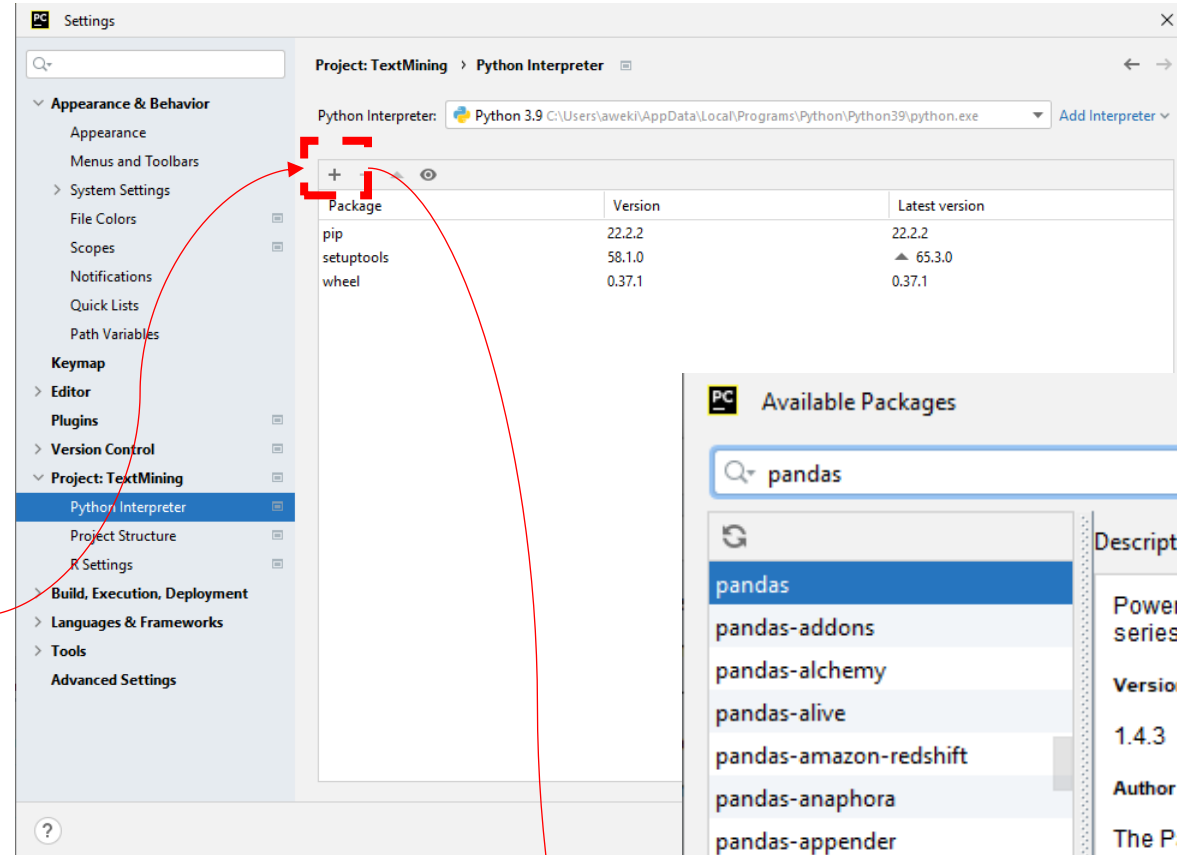
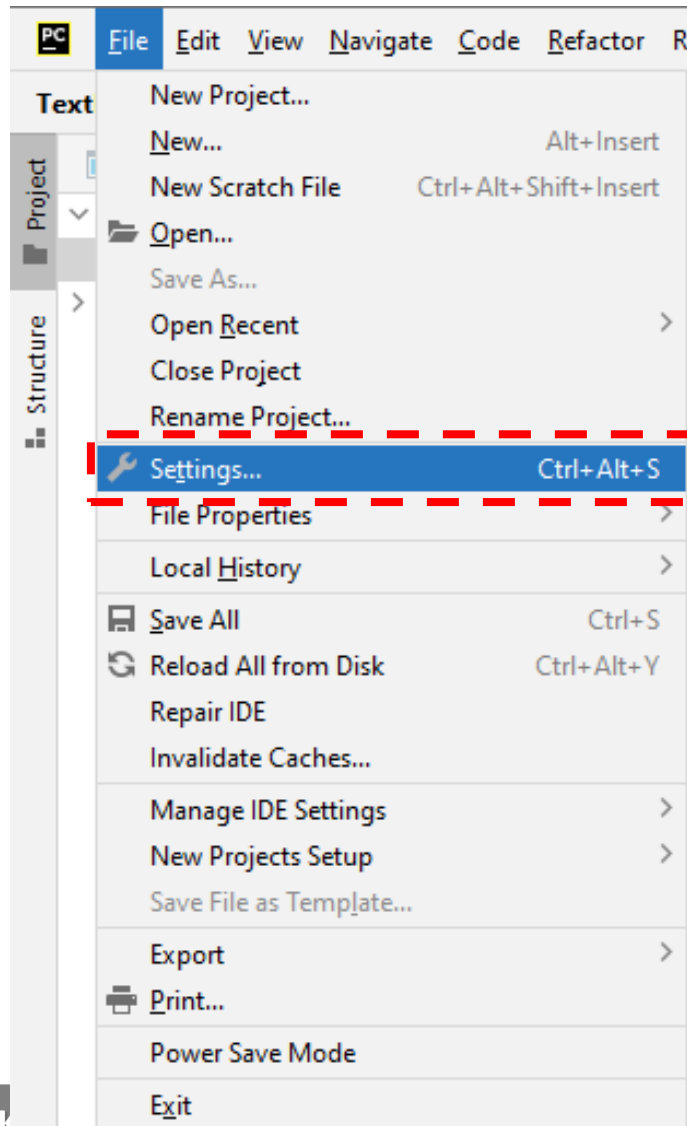
- Create new project





# Run Python & Version Control

- Add new package



# Run Python & Version Control

- Change Python version

The image shows the PyCharm 'Settings' window with the 'Python Interpreter' tab selected for the 'TextMining' project. The current interpreter is 'Python 3.9 C:\Users\aweki\AppData\Local\Programs\Python\Python39\python.exe'. A red dashed box highlights the 'Add Interpreter' button. A red arrow points from this button to the 'Add Python Interpreter' dialog box.

The 'Add Python Interpreter' dialog box shows the 'Virtualenv Environment' tab selected. The 'Environment' is set to 'New'. The 'Location' is 'E:\Google Drive (awekim@handong.edu)\[Research]\[Python]\TextMining\venv'. The 'Base interpreter' dropdown is open, showing a list of available Python interpreters. A red dashed box highlights the dropdown menu, and a red arrow points from the 'Add Interpreter' button to the 'Python 3.9' entry in the list.

Package	Version	Latest version
pip	22.2.2	22.2.2
setuptools	58.1.0	▲ 65.3.0
wheel	0.37.1	0.37.1

Base interpreter
Python 3.9 C:\Users\aweki\AppData\Local\Programs\Python\Python39\python.exe
Python 3.8 (2) C:\Users\aweki\AppData\Local\Programs\Python\Python38\python.exe
Python 3.8 C:\Users\aweki\AppData\Local\Programs\Python\Python38-32\python.exe
C:\Users\aweki\AppData\Local\Programs\Python\Python37\python.exe
C:\Users\aweki\AppData\Local\Programs\Python\Python310\python.exe
C:\Python34\python.exe
C:\Python27\ArcGIS10.7\python.exe

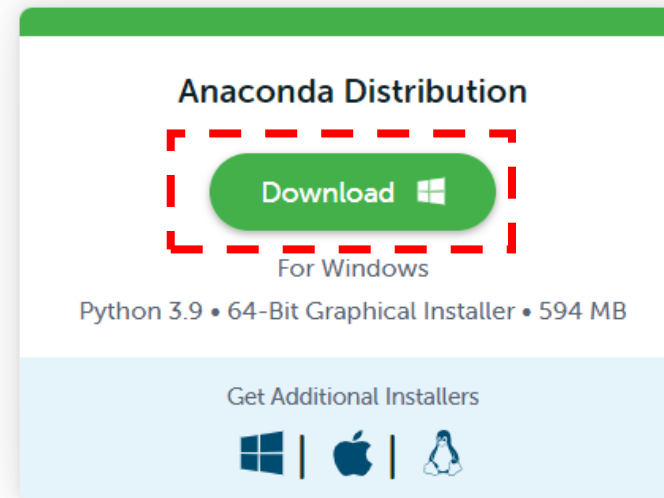
- Anaconda
  - Download from <https://www.anaconda.com/products/distribution>
  - Includes some useful packages as a default setting
  - Allows us to run a separate virtual environment
  - Often used for deep learning
- If data storage is limited, you can use “miniconda”



Individual Edition is now

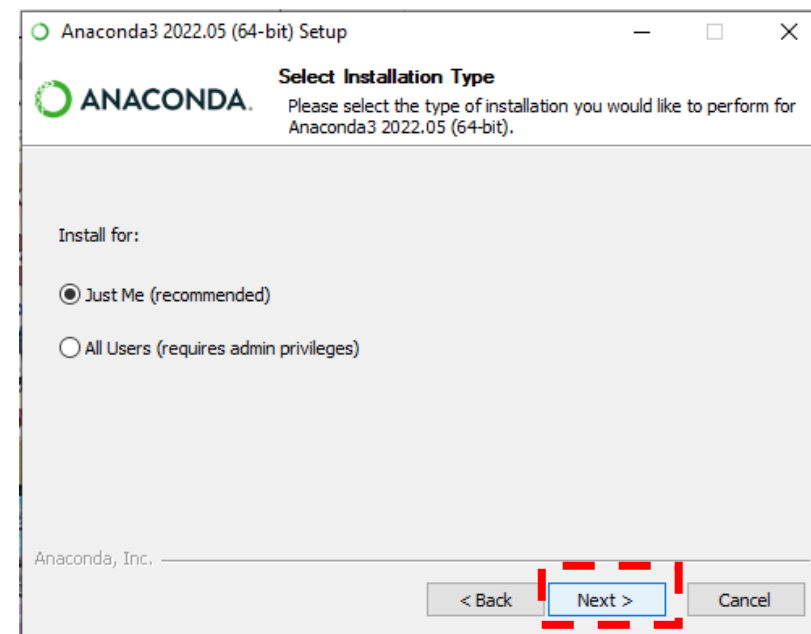
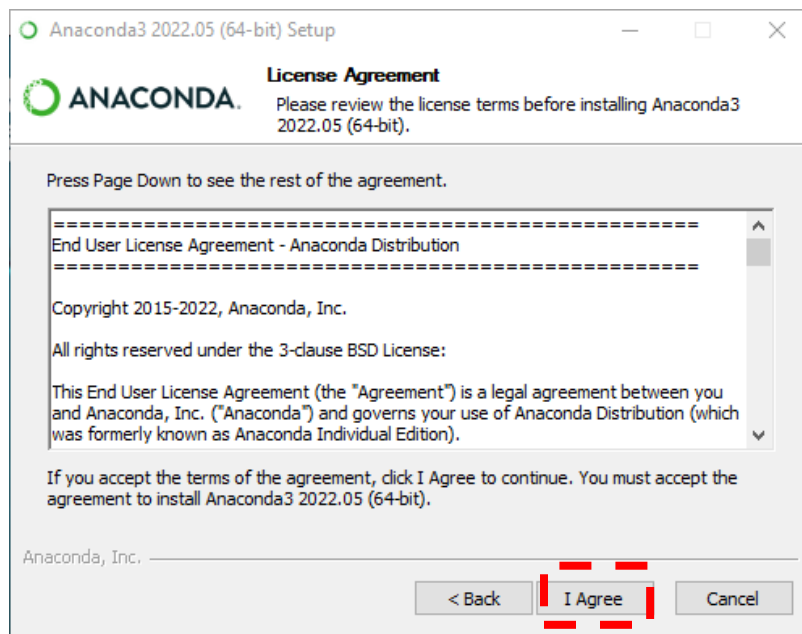
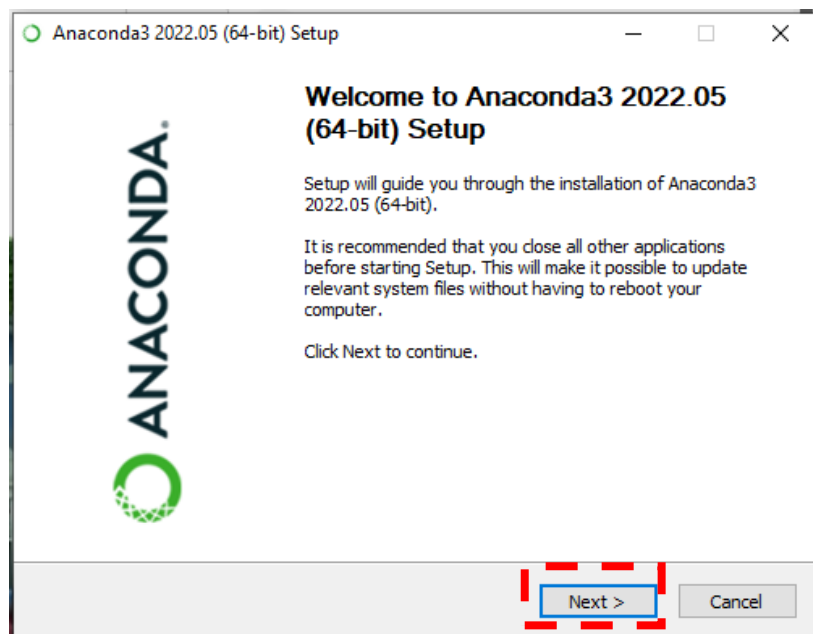
## ANACONDA DISTRIBUTION

The world's most popular open-source Python distribution platform



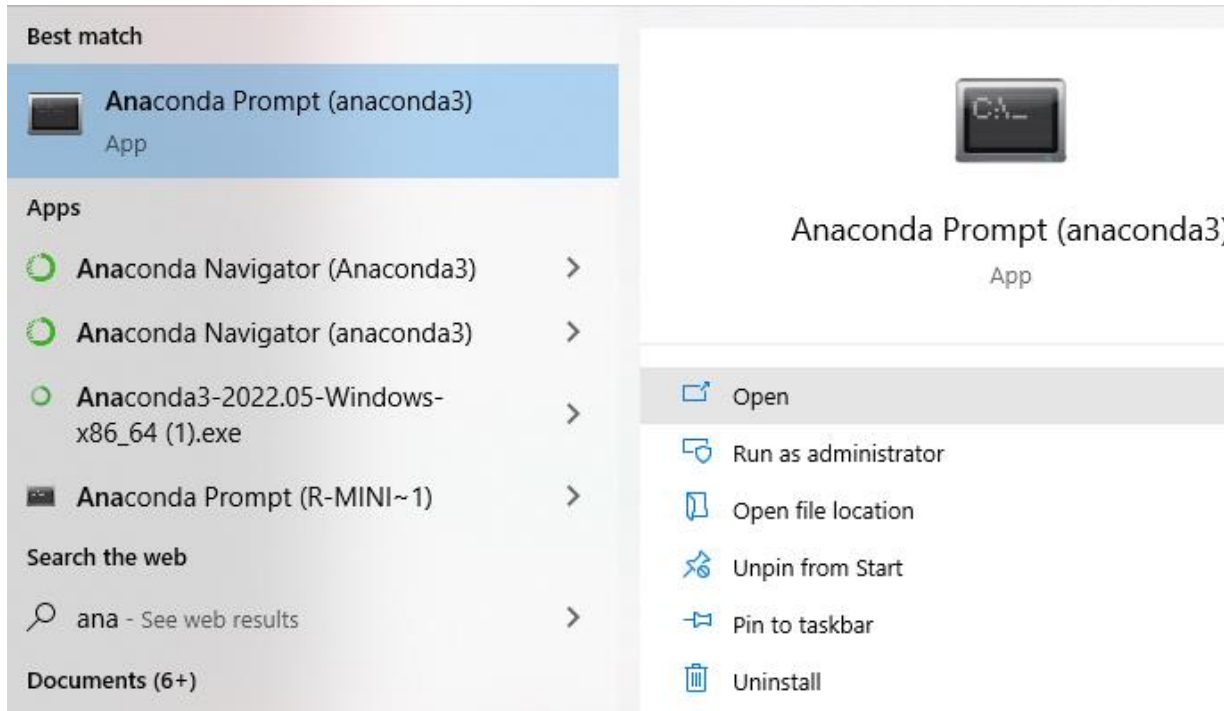
# Install Anaconda

- Install with “Run as administrator”



- Create and activate virtual environment

*Name of virtual environment*



> conda activate -n *virtualenv* python=3.8

> conda env list *Returns list of conda environment*

> conda create --clone *virtualenv* -n *newvirtualenv*

> conda activate *virtualenv*

> conda deactivate

> conda env remove -n *virtualenv* *Remove conda environment*

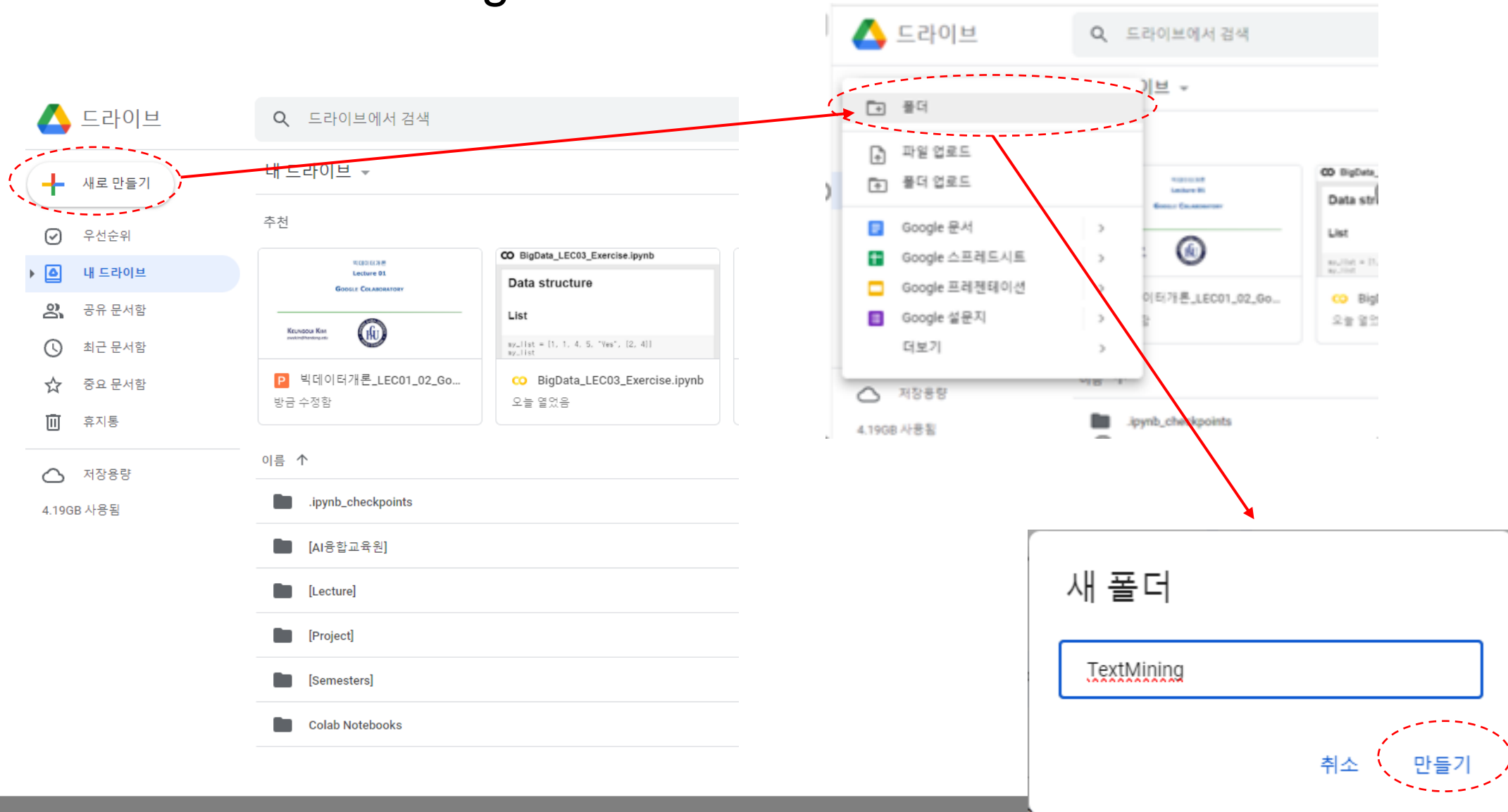
```
Administrator: Anaconda Prompt (anaconda3)

(base) C:\WINDOWS\system32>conda activate tf_gpu

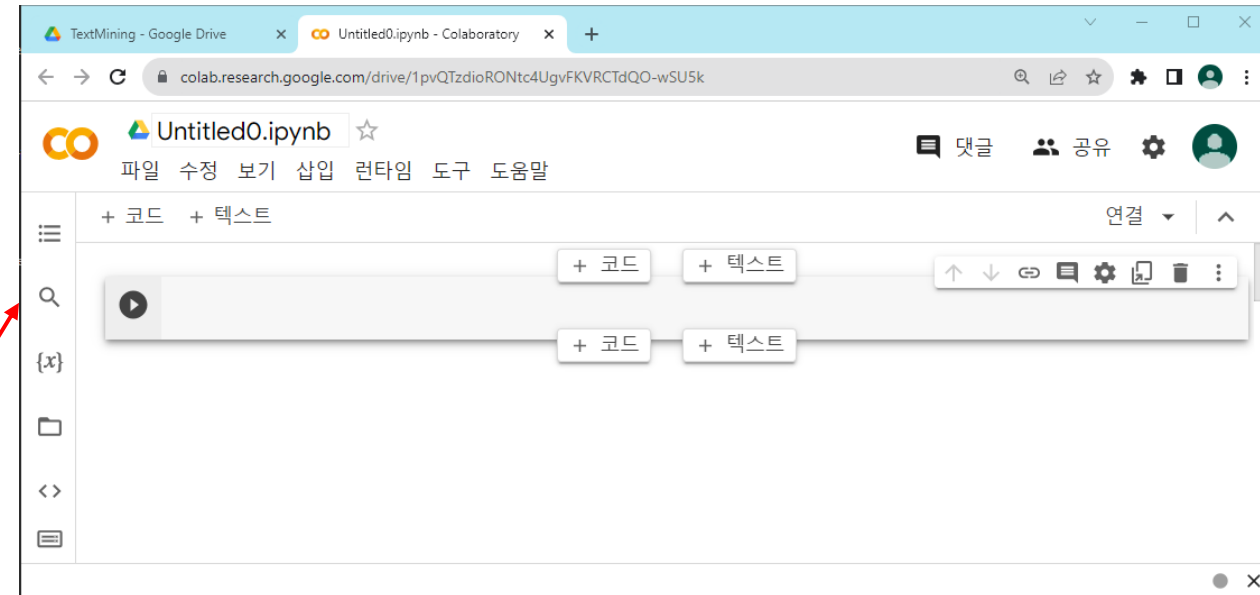
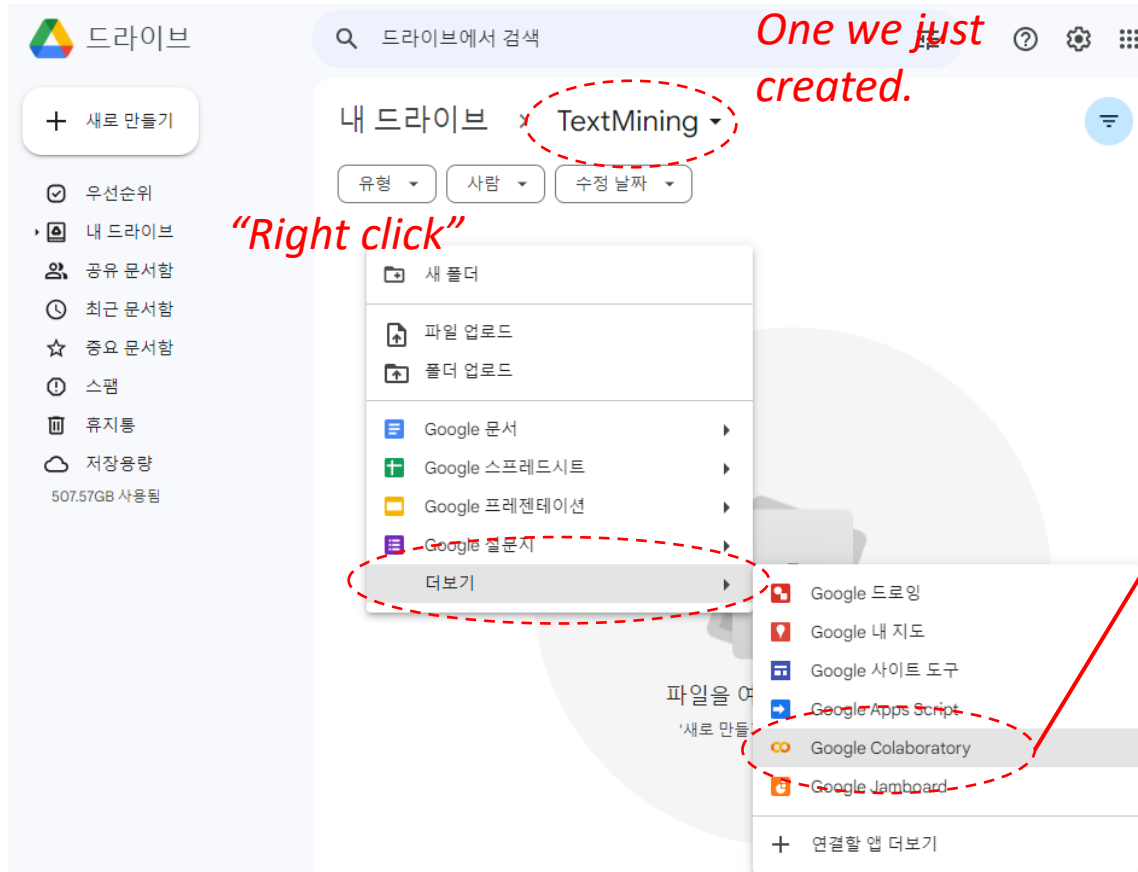
(tf_gpu) C:\WINDOWS\system32>pip install tensorflow
```

# *RPython in Google Colab*

- Create folder for Google Colab



- Create Google Colab document





- Change Runtime type

The image shows the JupyterLab interface. On the left, the 'Runtime' menu is open, listing various execution actions. The '런타임 유형 변경' (Change Runtime Type) option at the bottom is circled with a red dashed line. A red arrow points from this option to the '런타임 유형 변경' (Change Runtime Type) dialog box on the right.

**런타임 유형 변경**

런타임 유형

Python 3 ▼ *Select either R or Python*

하드웨어 가속기 ?

☒ CPU ☐ T4 GPU ☐ A100 GPU ☐ V100 GPU

☐ TPU *Select GPU if necessary*

프리미엄 GPU를 이용하시겠어요? [추가 컴퓨팅 단위 구매](#)

취소 저장