



통계특강 with Python

Python 가상환경 만들기

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가상환경이란?



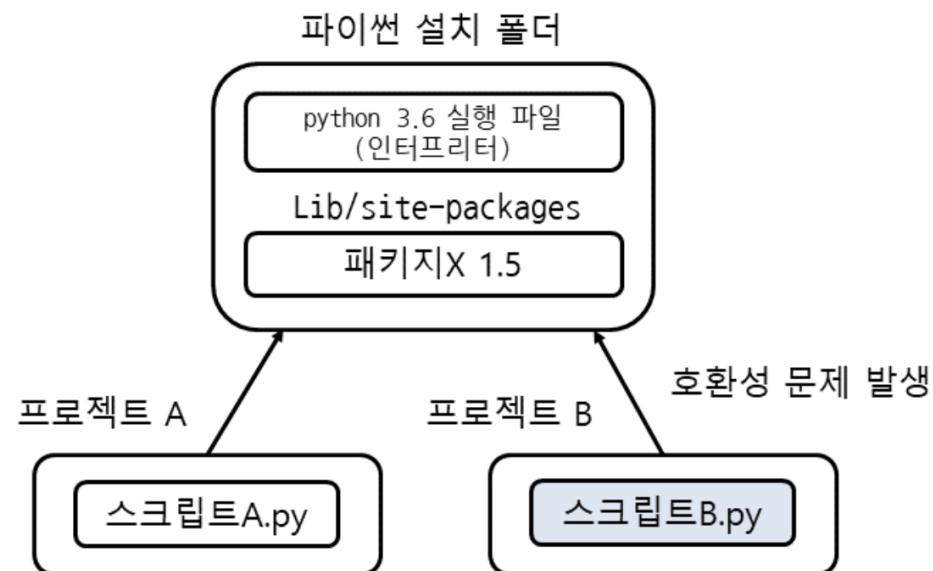
가상환경이란?

- 가상환경(Virtual Environments)는 가상의 Python 환경을 구축하는 것을 의미
- Python 설치 이후 우리가 사용하고 있는 것은 `base`이며, 여기에 계속 라이브러리를 설치하다 보면 라이브러리 간의 의존성(dependency) 문제가 종종 발생
- 이러한 문제를 해결하기 위해 독립적인 Python 환경을 만들어 패키지와 버전을 관리하기 위한 것이 가상환경!!



가상환경이 왜 필요할까?

글로벌 파이썬 환경

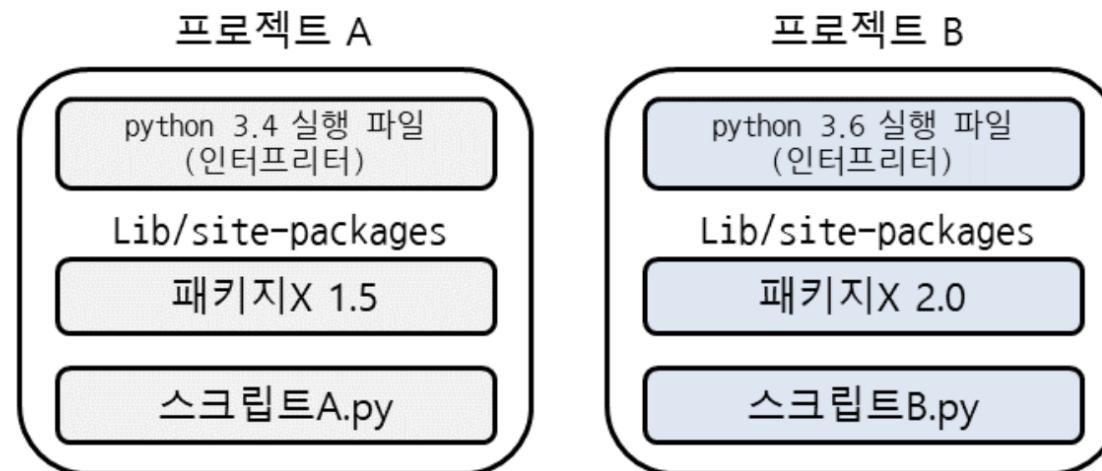


그림출처: <https://dojang.io/mod/page/view.php?id=2470>



가상환경이 왜 필요할까?

가상 환경



그림출처: <https://dojang.io/mod/page/view.php?id=2470>

가상환경 만들기



가상환경 만드는 순서

1. 가상환경 만들기

- 가상환경 이름 : crawler

2. 가상환경에 필요한 모듈 설치

- 필요한 모듈

- beautifulsoup4
- requests
- selenium
- pandas

3. 가상환경 실행

1. 가상환경 만들기



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Applications on base (root) Channels Refresh

Icon	Name	Description	Version	Action
DL	Datalore	Online Data Analysis Tool with smart coding assistance by JetBrains. Edit and run your Python notebooks in the cloud and share them with your team.		Launch
IBMWSC	IBM Watson Studio Cloud	IBM Watson Studio Cloud provides you the tools to analyze and visualize data, to cleanse and shape data, to create and train machine learning models. Prepare data and build models, using open source data science tools or visual modeling.		Launch
lab	JupyterLab	An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture.	3.0.14	Launch
jupyter	Notebook	Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis.	6.3.0	Launch
IPy	Qt Console	PyQt GUI that supports inline figures, proper multiline editing with syntax highlighting, graphical calltips, and more.	5.0.3	Launch
SPY	Spyder	Scientific PYthon DevelopEnvironent. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features	4.2.5	Launch
Glueviz	Glueviz	Multidimensional data visualization across files. Explore relationships within and among related datasets.	1.0.0	Install
Orange	Orange 3	Component based data mining framework. Data visualization and data analysis for novice and expert. Interactive workflows with a large toolbox.	3.26.0	Install
PC	R			

1. 가상환경 만들기



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base (root)

Installed Channels Update index... Search Packages

Name	Description	Version
_ipyw_jlab_nb_ex...		0.1.0
alabaster		0.7.12
anaconda		2021.05
anaconda-client		1.7.2
anaconda-project		0.9.1
anyio		2.2.0
appdirs		1.4.4
applaunchservices		0.2.1
appnope		0.1.2
appscript		1.1.2
argh		0.26.2
argon2-cffi		20.1.0
asn1crypto		1.4.0
astroid		2.5
astropy		4.2.1
async-generator	Python	1.10
async_generator		1.10

354 packages available

1. 가상환경 만들기



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Search Environments base (root)

Installed Channels Update index... Search Packages

Name	Description	Version
✓ _ipyw_jlab_nb_ex...		0.1.0
✓ alabaster		0.7.12
✓ anaconda		2021.05
✓ appscript		1.1.2
✓ argh		0.26.2
✓ argon2-cffi		20.1.0
✓ asn1crypto		1.4.0
✓ astroid		2.5
✓ astropy		4.2.1
✓ async-generator	Python	1.10
✓ async_generator		1.10

Create new environment

Name: crawler

Location: /Users/hyunseung/anaconda3/envs/crawler

Packages: Python 3.8 R

Create Cancel

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354 packages available

2. 가상환경에 필요한 모듈 설치



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base (root) crawler >

Name	Description	Version
ca-certificates		2021.5.25
certifi		2021.5.30
libcxx		10.0.0
libffi		3.3
ncurses		6.2
openssl		1.1.1k
pip		21.1.3
python		3.8.10
readline		8.1
setuptools		52.0.0
sqlite		3.36.0
tk		8.6.10
wheel		0.36.2
xz		5.2.5
zlib		1.2.11

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15 packages available

2. 가상환경에 필요한 모듈 설치



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Search Environments Not installed Channels Update index... beautifulsoup X

base (root) Name Description Version

crawler beautifulsoup4 4.9.3

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1 package available matching "beautifulsoup" 1 package selected

Apply Clear

The screenshot shows the Anaconda Navigator interface. On the left, there's a sidebar with links for Home, Environments (which is selected), Learning, and Community. Below that is an advertisement for 'ANACONDA. NUCLEUS' with a 'Join Now' button. The main area has a search bar at the top with 'Not installed' selected and the search term 'beautifulsoup'. Below the search bar is a table with columns for Name, Description, and Version. One row is visible for 'beautifulsoup4' in the 'crawler' environment, version 4.9.3. At the bottom of the interface, there are buttons for Create, Clone, Import, Remove, and Apply/Clear, with 'Apply' being highlighted by a red box.

2. 가상환경에 필요한 모듈 설치



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Search Environments Not installed Channels Update index... requests

Name	Description	Version
aws-requests-auth		0.4.3
<input checked="" type="checkbox"/> requests		2.25.1
requests-file		1.5.1
requests-ftp		0.3.1
requests-futures		1.0.0
requests-kerberos		0.12.0
requests-oauthlib		1.3.0
requests-toolbelt		0.9.1
requests_download		0.1.2

9 packages available matching "requests" 1 package selected

Apply Clear

2. 가상환경에 필요한 모듈 설치



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Search Environments Not installed Channels Update index... selenium

Name	Description	Version
pytest-selenium		2.0.1
r-seleniumpipes		0.3.7
selenium		3.9.0

base (root) crawler >

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3 packages available matching "selenium" 1 package selected

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3. 가상환경 실행



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crawler

Datalore Online Data Analysis Tool with smart coding assistance by JetBrains. Edit and run your Python notebooks in the cloud and share them with your team. Launch	IBM Watson Studio Cloud IBM Watson Studio Cloud provides you the tools to analyze and visualize data, to cleanse and shape data, to create and train machine learning models. Prepare data and build models, using open source data science tools or visual modeling. Launch	Glueviz 1.0.0 Multidimensional data visualization across files. Explore relationships within and among related datasets. Install	JupyterLab 3.0.14 An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture. Install
jupyter Notebook 6.4.0 Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis. Install	Orange 3 3.26.0 Component-based data mining framework. Data visualization and data analysis for novice and expert. Interactive workflows with a large toolbox. Install	PyCharm Professional A full-fledged IDE by JetBrains for both Scientific and Web Python development. Supports HTML, JS, and SQL. Install	IPyConsole 5.1.0 PyQt GUI that supports inline figures, proper multiline editing with syntax highlighting, graphical calltips, and more. Install
R	Python		

3. 가상환경 실행



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Application	Description	Version	Status
Datalore	Online Data Analysis Tool with smart coding assistance by JetBrains. Edit and run your Python notebooks in the cloud and share them with your team.	3.0.14	Launch
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PyCharm Professional	A full-fledged IDE by JetBrains for both Scientific and Web Python development. Supports HTML, JS, and SQL.	2021.3.1	Install
Qt Console	PyQt GUI that supports inline figures, proper multiline editing with syntax highlighting, graphical calltips, and more.	5.1.0	Install
R			
Python			



감사합니다!

수업관련 질문사항은 아래 메일로 보내주세요.

hyunsung1021@gmail.com

실습자료는 아래 페이지에서 받으실 수 있습니다.

<https://statkim.github.io/stats-summer-2021/>