



Python

파이썬 설치

김선녕(sykim.lecture@gmail.com)



Anaconda 설치

Python 단독설치




- Python이란?
 - 1991년 귀도 반 로섬(Guido Van Rossum, 1956년, 네덜란드, 히도 판 로섬)이 발표
 - 1989년 크리스마스 주에 연구실이 닫혀 있어서 심심한 김에...
 - 기술자들은 심심할 때 항상 걸작이 나온다??
 - 다양한 플랫폼에서 쓸 수 있고, 라이브러리(모듈)가 풍부하여, 대학을 비롯한 여러 교육 기관, 연구 기관 및 산업계에서 이용이 증가
 - Interpreter 언어(컴파일 과정이 필요 없다).
 - 들여쓰기를 사용해서 블록을 구분하는 독특한 문법을 채용
 - 사전적 의미는 '피톤'이라는 이름으로 알려진 고대 그리스신화에 나오는 거대한 뱀의 이름
- Python coding convention
 - <https://www.python.org/dev/peps/pep-0008/>
- 커뮤니티(Community)
 - 파이콘 코리아(Pycon Korea)
 - <https://www.facebook.com/groups/pythonkorea>



출처 : 위키피디아

- <https://www.anaconda.com/products/individual>

Anaconda Installers

Windows 	MacOS 	Linux 
<div>Python 3.8</div> <div>64-Bit Graphical Installer (457 MB)</div> <div>32-Bit Graphical Installer (403 MB)</div>	<div>Python 3.8</div> <div>64-Bit Graphical Installer (435 MB)</div> <div>64-Bit Command Line Installer (428 MB)</div>	<div>Python 3.8</div> <div>64-Bit (x86) Installer (529 MB)</div> <div>64-Bit (Power8 and Power9) Installer (279 MB)</div>

ADDITIONAL INSTALLERS

The [archive](#) has older versions of Anaconda Individual Edition installers. The Miniconda installer homepage can be found [here](#).

- jupyter 소스 root경로 설정
- (base) C:\Users\user>jupyter notebook --generate-config
 - C:\Users\user\.jupyter\jupyter_notebook_config.py 파일이 생성.
 - Text editor로 jupyter_notebook_config.py에서 원하는 경로(root경로)로 수정

```
201  ## The MathJax.js configuration file that is to be used.
202  #c.NotebookApp.mathjax_config = 'TeX-AMS-MML_HTMLorMML-full, Safe'
203
204  ## A custom url for MathJax.js. Should be in the form of a case-sensitive url to
205  # MathJax, for example: /static/components/MathJax/MathJax.js
206  #c.NotebookApp.mathjax_url = ''
207
208  ## Dict of Python modules to load as notebook server extensions. Entry values can
209  # be used to enable and disable the loading of the extensions. The extensions
210  # will be loaded in alphabetical order.
211  #c.NotebookApp.nbserver_extensions = {}
212
213  ## The directory to use for notebooks and kernels.
214  #c.NotebookApp.notebook_dir = ''
215  c.NotebookApp.notebook_dir = 'D:/python_workspace'
216
217  ## Whether to open in a browser after starting. The specific browser used is
218  # platform dependent and determined by the python standard library `webbrowser`
219  # module, unless it is overridden using the --browser (NotebookApp.browser)
220  # configuration option.
221  #c.NotebookApp.open_browser = True
```

Anaconda Navigator

6

Anaconda Navigator

File Help

ANACONDA.NAVIGATOR

Sign in

Home

Environments

Learning




Community

NUMFOCUS
OPEN CODE • BETTER SCIENCE
Donate


Support the OSS Community

Documentation

Anaconda Blog




Applications on base (root) Channels Refresh




CMD.exe Prompt
0.1.1
Run a cmd.exe terminal with your current environment from Navigator activated

Launch




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




JupyterLab
2.2.6
An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture.

Launch




Jupyter Notebook
6.1.4
Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis.

Launch




Powershell Prompt
0.0.1
Run a Powershell terminal with your current environment from Navigator activated

Launch




PyCharm Community
An IDE by JetBrains for pure Python development. Supports code completion, listing, and debugging.

Launch




Qt Console
4.7.7
PyQt GUI that supports inline figures, proper multiline editing with syntax highlighting, graphical calltips, and more.

Launch




Spyder
4.0.0
Scientific Python Development Environment. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features

Launch




VS Code
1.51.1
Streamlined code editor with support for development operations like debugging, task running and version control.

Launch




Glueviz
0.15.2
Multidimensional data visualization across files. Explore relationships within and among related datasets.

Install




Orange 3
3.23.1
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.

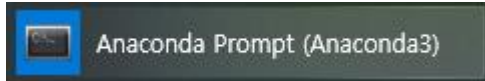
Install



RStudio
1.1.456
A set of integrated tools designed to help you be more productive with R. Includes R essentials and notebooks.

Install

- 최신 패키지 업데이트(Anaconda Prompt (Anaconda3) 선택)



- (base) C:\Users\user>conda update -n base conda
 - (base) C:\Users\user>conda update --all
- 파이썬 버전 확인
 - (base) C:\Users\user>python --version
- conda 유틸리티
 - (base) C:\Users\user> conda --help
 - (base) C:\Users\user> conda list
 - (base) C:\Users\user>conda install 패키지명
 - (base) C:\Users\user>conda update 패키지명
 - (base) C:\Users\user> conda uninstall 패키지명
- pip3 유틸리티
 - (base) C:\Users\user>pip3 --help
 - (base) C:\Users\user>pip3 list
 - (base) C:\Users\user>pip3 install 패키지명
 - (base) C:\Users\user>pip3 update 패키지명
 - (base) C:\Users\user>pip3 uninstall 패키지명



Anaconda 설치 Python 단독설치

- <https://code.visualstudio.com/>

The image shows the Visual Studio Code website on the left and a screenshot of the Visual Studio Code IDE interface on the right.

Visual Studio Code Website:

- Header: Visual Studio Code, Docs, Updates, Blog, API, Extensions, FAQ, Learn, Search Docs, Download.
- Message: Version 1.51 is now available! Read about the new features and fixes from October.
- Main Text: Code editing. Redefined.
- Subtext: Free. Built on open source. Runs everywhere.
- Buttons: Download for Windows (Stable Build), Other platforms and Insiders Edition.
- Footer: By using VS Code, you agree to its license and privacy statement.

Visual Studio Code IDE Screenshot:

- File Explorer: Extensions Marketplace, @sort:installs.
- Extensions List:
 - Python 2019.6.24221 54.9M ★ 4.5
 - GitLens — Git sup... 9.8.5 23.1M ★ 5
 - C/C++ 0.24.0 23M ★ 3.5
 - ESLint 1.9.0 21.9M ★ 4.5
 - Debugger for Ch... 4.11.6 20.6M ★ 4
 - Language Supp... 0.47.0 18.7M ★ 4.5
 - vscode-icons 8.8.0 17.2M ★ 5
 - Vetur 0.21.1 17M ★ 4.5
 - C# 1.21.0 15.6M ★ 4
- Editor: JS serviceWorker.js, src > JS serviceWorker.js > register > window.addEventListener("load") callback.
- Code Snippets:
 - product
 - productSub
 - removeSiteSpecificTrackingException
 - removeWebWideTrackingException
 - requestMediaKeySystemAccess
 - sendBeacon
 - serviceWorker (property) Navigator.serviceWorke...
 - storage
 - storeSiteSpecificTrackingException
 - storeWebWideTrackingException
 - userAgent
 - vendor
- Terminal: 1: node
- Output: You can now view create-react-app in the browser. Local: http://localhost:3000/ On Your Network: http://10.211.55.3:3000/ Note that the development build is not optimized.
- Status Bar: master, 0 errors, 0 warnings, 0 info, Ln 43, Col 19, Spaces: 2, UTF-8, LF, JavaScript.

The screenshot shows the Visual Studio Code interface with the Python extension being installed. The left sidebar displays a list of extensions, with 'Python' by Microsoft at the top. The main editor area shows the 'Python' extension details, including its description, version (2020.11.371526539), and a '설치' (Install) button. Below the extension details, the 'Python extension for Visual Studio Code' section provides a quick start guide and instructions on how to set up the environment. The status bar at the bottom indicates that Python 3.9.0 64-bit is installed.

Python 2020.11.371526539
Linting, Debugging (multi-threaded, remote), Intellisense, ...
Microsoft

Python for VSCode 0.2.3
Python language extension for vscode
Thomas Haakon Townsend

Python Extension Pack 1.6.0
Popular Visual Studio Code extensions for Python
Don Jayamanne

Python Test Explorer for Visual Studi... 0.6.3
Run your Python tests in the Sidebar of Visual Studio Code
Little Fox Team

Python Docstring Generator 0.5.4
Automatically generates detailed docstrings for python fu...
Nils Werner

Python Indent 1.12.0
Correct python indentation.
Kevin Rose

AREPL for python 2.0.1
real-time python scratchpad
Almenon

Python Extended 0.0.1
Python Extended is a vscode snippet that makes it easy to...
Taiwo Kareem

Python Preview 0.0.4
Provide Preview for Python Execution.
dongli

Python Path 0.0.11
Python imports utils.
Mathias Gesbert

Kite AI Code AutoComplete: Python,... 0.135.0
AI powered autocomplete, code snippets, code signatures...
Kite

Qt for Python 0.5.3
Qt for Python (PyQt5 and PySide2) extension for Visual St...
Sean Wu

python snippets 1.0.2
Code snippets for python
Ferhat Yalçın

Python ms-python.python
Microsoft | 28,454,566 | ★★★★★ | 저장소 | 라이선스 | v2020.11.371526539
Linting, Debugging (multi-threaded, remote), Intellisense, Jupyter Notebooks, code formatting, refactoring, unit tests, snippets, and more.
사용 안 함 | 제거 | 이 확장은 전역적으로 사용하도록 설정되었습니다.

세부 정보 기능 기여도 변경 로그 증속성

Python extension for Visual Studio Code

A Visual Studio Code extension with rich support for the Python language (for all actively supported versions of the language: >=3.6), including features such as IntelliSense, linting, debugging, code navigation, code formatting, Jupyter notebook support, refactoring, variable explorer, test explorer, snippets, and more!

Quick start

- Step 1. Install a supported version of Python on your system (note: that the system install of Python on macOS is not supported).
- Step 2. Install the Python extension for Visual Studio Code.
- Step 3. Open or create a Python file and start coding!

Set up your environment

- Select your Python interpreter by clicking on the status bar
- Configure the debugger through the Debug Activity Bar

Python 3.9.0 64-bit 0 0 0

launch.json - pvscc-logo - Visual Studio Code

```
1 // Use IntelliSense to learn about possible attributes.  
2 // Hover to view descriptions of existing attributes.  
3 // For more information, visit: https://go.microsoft.com/fwlink/?linkid=829090  
4 "version": "0.2.0",  
5
```

EXTENSIONS: MARKETPLACE

Extension: Korean Language Pack for Visual Studio Code

Korean Language Pack for Visual Studio Code

Microsoft | 473,906 | ★★★★★ | Repository | v1.52.2

Language pack extension for Korean

[Uninstall](#) [Settings](#) This extension is enabled globally.

[Details](#) [Feature Contributions](#) [Changelog](#)

VS Code용 한국어 팩

한국어 팩은 지역화된 VS Code용 UI 환경을 제공합니다.

사용법

설치가 완료되면 `locale.json`에서 `"locale": "ko"`를 설정하여 한국어 팩을 로드합니다. `locale.json`을 수정하려면 `Ctrl+Shift+P`를 눌러 명령 팔레트를 불러온 이후 `"config"`를 입력하여 사용 가능한 명령 목록을 필터링합니다. 그다음 언어 구성 명령을 선택합니다. 자세한 내용은 [Docs](#)를 참조하세요.

기여

번역 문자열은 MLCP(Microsoft 지역화 커뮤니티 플랫폼)의 "DevTools - VS Code" 프로젝트에 유지 관리됩니다.

번역에 기여하거나 번역을 향상하려면 [커뮤니티 지역화 페이지](#)에서 자세히 알아보세요.

라이선스

소스 코드 및 문자열은 [MIT](#) 라이선스에 따라 사용이 허가됩니다.

크레딧

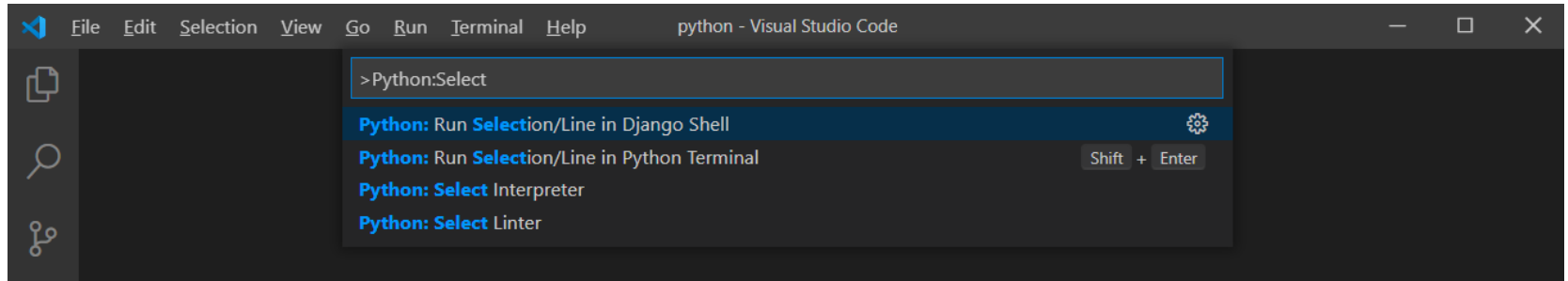
한국어 팩은 "커뮤니티에 의한, 커뮤니티를 위한" 커뮤니티 지역화 노력의 산물입니다.

도움을 주신 커뮤니티 기여자분들께 진심으로 감사드립니다.

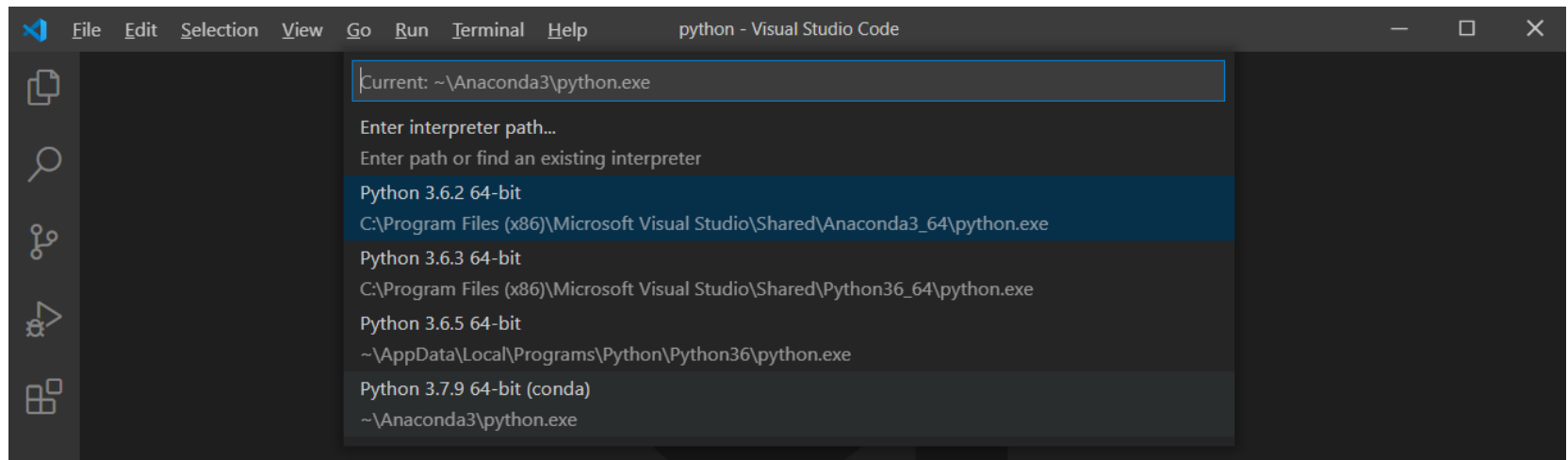
우수 기여자:

Python 3.7.9 64-bit (conda) 0 0

- [View]→[Command Palette...] (*Ctrl + Shift + P*) 선택 후
“*Pyhton: Select Interpreter*” 입력 & 선택



- 설치된 Python 프로그램 선택



study 디렉토리 생성

13

The screenshot shows the Visual Studio Code interface with a file explorer on the left, a code editor in the center, and a terminal at the bottom. The file explorer shows a directory named 'STUDY' containing a file 'first.py'. The code editor shows the contents of 'first.py', which is a Python script that imports the 'sys' module and prints its version. The terminal shows the command 'python first.py' being executed, resulting in the output '3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64)]'.

Visual Studio Code interface showing a Python script execution.

File Explorer (Left):

- 탐색기
- > 열려 있는 편집기
- STUDY
- first.py

Code Editor (Center):

```
first.py
1 import sys
2
3 print(sys.version)
4
```

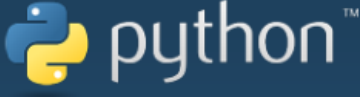
Terminal (Bottom):

1: powershell

```
PS G:\workspace_script\study\python\study> python first.py
3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64)]
PS G:\workspace_script\study\python\study>
```

Status Bar (Bottom):

Python 3.7.9 64-bit (conda) 0 0 줄 4, 열 1 공백: 2 UTF-8 CRLF Python



Donate

Search

GO

Socialize

About

Downloads

Documentation

Community

Success Stories

News

Events


Download the latest version for Windows

Download Python 3.8.0

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

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

Looking for Python 2.7? See below for specific releases



Looking for a specific release?

Python releases by version number:

Release version	Release date		Click for more
Python 3.5.9	Nov. 2, 2019	Download	Release Notes
Python 3.5.8	Oct. 29, 2019	Download	Release Notes
Python 2.7.17	Oct. 19, 2019	Download	Release Notes
Python 3.7.5	Oct. 15, 2019	Download	Release Notes
Python 3.8.0	Oct. 14, 2019	Download	Release Notes
Python 3.7.4	July 8, 2019	Download	Release Notes

Files

Version	Operating System	Description	MD5 Sum	File Size	PGP
Gzipped source tarball	Source release		1cd071f78ff6d9c7524c95303a3057aa	23126230	SIG
XZ compressed source tarball	Source release		08ed8030b1183107c48f2092e79a87e2	17236432	SIG
macOS 64-bit/32-bit installer	Mac OS X	{Deprecated} for Mac OS X 10.6 and later	cd503606638c8e6948a591a9229446e4	35020778	SIG
macOS 64-bit installer	Mac OS X	for macOS 10.9 and later	20d9540e88c6aaba1d2bc1ad5d069359	28198752	SIG
Windows help file	Windows		608cafa250f8baa11a69bbfcb842c0e0	8141193	SIG
Windows x86-64 embeddable zip file	Windows	for AMD64/EM64T/x64	436b0f803d2a0b393590030b1cd59853	7500597	SIG
Windows x86-64 executable installer	Windows	for AMD64/EM64T/x64	697f7a884e80ccaa9dff3a77e979b0f8	26777448	SIG
Windows x86-64 web-based installer	Windows	for AMD64/EM64T/x64	b8b6e5ce8c27c20bfd28f1366ddf8a2f	1363032	SIG
Windows x86 embeddable zip file	Windows		726877d1a1f5a7dc68f6a4fa48964cd1	6745126	SIG
Windows x86 executable installer	Windows		cfe9a828af6111d5951b74093d70ee89	25766192	SIG
Windows x86 web-based installer	Windows		ea946f4b76ce63d366d6ed0e32c11370	1324872	SIG

