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Python

# 파이썬 설치

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# 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

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Anaconda Navigator

File Help

ANACONDA.NAVIGATOR

Sign in


Home

Environments

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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






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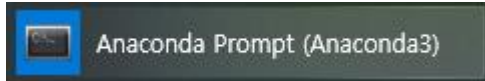
Support the OSS Community

Documentation

Anaconda Blog



- 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 application 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.
- Text: Code editing. Redefined.
- Text: Free. Built on open source. Runs everywhere.
- Buttons: Download for Windows (Stable Build), Other platforms and Insiders Edition.
- Text: By using VS Code, you agree to its license and privacy statement.

**Visual Studio Code Application Interface:**

- File Edit Selection View Go Debug Terminal Help serviceWorker.js - create-react-app - Visual Studio Code - In...
- EXTENSIONS: MARKETPLACE @sort:installs
- Extensions List:
  - Python 2019.6.24221 54.9M ★ 4.5 (Linting, Debugging (multi-threaded, ...))
  - GitLens — Git sup... 9.8.5 23.1M ★ 5 (Supercharge the Git capabilities built...)
  - C/C++ 0.24.0 23M ★ 3.5 (C/C++ IntelliSense, debugging, and ...)
  - ESLint 1.9.0 21.9M ★ 4.5 (Integrates ESLint JavaScript into VS ...)
  - Debugger for Ch... 4.11.6 20.6M ★ 4 (Debug your JavaScript code in the C...)
  - Language Supp... 0.47.0 18.7M ★ 4.5 (Java Linting, IntelliSense, formatting, ...)
  - vscode-icons 8.8.0 17.2M ★ 5 (Icons for Visual Studio Code)
  - Vetur 0.21.1 17M ★ 4.5 (Vue tooling for VS Code)
  - C# 1.21.0 15.6M ★ 4 (C# for Visual Studio Code (powered ...))
- Code Editor: JS App.js, JS index.js, JS serviceWorker.js
- Code Editor Content (serviceWorker.js):

```
src > JS serviceWorker.js > register > window.addEventListener("load") callback
39
40
41
42 // Add some additional logging to localhost, p
43 // service worker/PWA documentation.
44
45 navigator.serviceWorker.ready.then(() => {
46   product
47   productSub
48   removeSiteSpecificTrackingException
49   removeWebWideTrackingException
50   requestMediaKeySystemAccess
51   sendBeacon
52   serviceWorker (property) Navigator.serviceWorke...
53   storage
54   storeSiteSpecificTrackingException
55   storeWebWideTrackingException
56   userAgent
57   vendor
58
59 function registerValidSW(swUrl, config) {
60   navigator.serviceWorker
61     .register(swUrl)
62     .then(registration => {
```
- TERMINAL 1: node
- Terminal Content:

```
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 marketplace open. The left sidebar displays a list of Python-related extensions, and the main panel shows the details for the 'Python' extension by Microsoft.

**Python extension marketplace (Left Sidebar):**

Extension Name	Version	Downloads	Rating	Author	Status
Python	2020.11.371526539	28.4M	4.5	Microsoft	설치
Python for VSCode	0.2.3	2.2M	2.5	Thomas Haakon Townsend	설치
Python Extension Pack	1.6.0	1.4M	4.5	Don Jayamanne	설치
Python Test Explorer for Visual Studio	0.6.3	231K	4.5	Little Fox Team	설치
Python Docstring Generator	0.5.4	388K	5	Nils Werner	설치
Python Indent	1.12.0	373K	5	Kevin Rose	설치
AREPL for python	2.0.1	203K	5	Almenon	설치
Python Extended	0.0.1	410K	5	Taiwo Kareem	설치
Python Preview	0.0.4	289K	4.5	dongli	설치
Python Path	0.0.11	173K	5	Mathias Gesbert	설치
Kite AI Code AutoComplete: Python,...	0.135.0	1.7M	4	Kite	설치
Qt for Python	0.5.3	132K	5	Sean Wu	설치
python snippets	1.0.2	120K	5	Ferhat Yalçın	설치

**Python extension details (Main Panel):**

**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](#) [재거](#) 이 확장은 전역적으로 사용하도록 설정되었습니다.

**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


The status bar shows the selected Python interpreter: **Python 3.9.0 64-bit** (0.0.0).

- Configure the debugger through the Debug Activity Bar


The Debug Activity Bar shows the selected debugger: **Python: Flask**.

The main editor shows the `views.py` file with the following 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",
```



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## Download the latest version for Windows

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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
<a href="#">Python 3.5.9</a>	Nov. 2, 2019	 <a href="#">Download</a>	<a href="#">Release Notes</a>
<a href="#">Python 3.5.8</a>	Oct. 29, 2019	 <a href="#">Download</a>	<a href="#">Release Notes</a>
<a href="#">Python 2.7.17</a>	Oct. 19, 2019	 <a href="#">Download</a>	<a href="#">Release Notes</a>
<a href="#">Python 3.7.5</a>	Oct. 15, 2019	 <a href="#">Download</a>	<a href="#">Release Notes</a>
<a href="#">Python 3.8.0</a>	Oct. 14, 2019	 <a href="#">Download</a>	<a href="#">Release Notes</a>
<a href="#">Python 3.7.4</a>	July 8, 2019	 <a href="#">Download</a>	<a href="#">Release Notes</a>

## Files

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

