

# Matplotlib 특징과 설치

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# 학습목표

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- ▶ Matplotlib 특징과 설치

# Matplotlib 특징





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- ▶ 시각화 유틸리티
- ▶ open source로 자유롭게 사용 가능
- ▶ 파이썬 package로 제공
- ▶ pip package manager로 Windows, Linux 및 MacOS 설치가능
- ▶ matplotlib.pyplot 모듈은 MATLAB과 비슷한 명령어 스타일로 작동

# Matplotlib 설치, 윈도우용

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- ▶ <https://sourceforge.net/projects/matplotlib/files/matplotlib/>
- ▶ 사이트 접속 후,

Name	Modified
 <a href="#">Parent folder</a>	
 <a href="#">matplotlib-1.5.2</a>	2017-04-05
 <a href="#">matplotlib-1.5.3</a>	2017-04-05
 <a href="#">matplotlib-2.0.0</a>	2017-04-05
 <a href="#">matplotlib-1.5.1</a>	2016-01-11

# Matplotlib 설치, 윈도우용

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Home / matplotlib / matplotlib-1.5.1

Name ▾	Modified ▾	Size ▾	Downloads / Week ▾
📁 Parent folder			
matplotlib-1.5.1-cp35-cp35m-macosx_10_6_intel.macosx_10_9_intel....	2016-01-11	49.7 MB	1 📄 ⓘ
matplotlib-1.5.1-cp35-none-win32.whl	2016-01-11	6.2 MB	12 📄 ⓘ
matplotlib-1.5.1-cp35-none-win_amd64.whl	2016-01-11	6.5 MB	6 📄 ⓘ
matplotlib-1.5.1-cp34-none-win_amd64.whl	2016-01-11	6.1 MB	0 ⓘ
matplotlib-1.5.1-cp34-none-win32.whl	2016-01-11	5.9 MB	4 📄 ⓘ
matplotlib-1.5.1-cp34-cp34m-macosx_10_6_intel.macosx_10_9_intel....	2016-01-11	49.7 MB	2 📄 ⓘ
matplotlib-1.5.1-cp27-none-win_amd64.whl	2016-01-11	6.1 MB	0 ⓘ
matplotlib-1.5.1-cp33-cp33m-macosx_10_6_intel.macosx_10_9_intel....	2016-01-11	49.7 MB	0 ⓘ
matplotlib-1.5.1-cp27-none-win32.whl	2016-01-11	6.0 MB	0 ⓘ
matplotlib-1.5.1-cp27-none-macosx_10_6_intel.macosx_10_9_intel.m...	2016-01-11	49.7 MB	0 ⓘ
matplotlib-1.5.1.tar.gz	2016-01-11	54.0 MB	1 📄 ⓘ

- ```
(base) hyerm2@ihyelim-ui-MacBookPro ~ % pip3 install matplotlib
Collecting matplotlib
  Downloading https://files.pythonhosted.org/packages/e8/7a/e3563e344543ae72b4c77442a548beeb5a/matplotlib-3.3.3-cp38-cp38-macosx_10_9_x86_
    |████████████████████| 8.5MB 4.4MB/s
```

# Matplotlib import, version

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- ▶ `import matplotlib`
- ▶ `print(matplotlib.__version__)`

\_\_ (under bar) 2개

```
import matplotlib  
print(matplotlib.__version__)
```

3.1.3

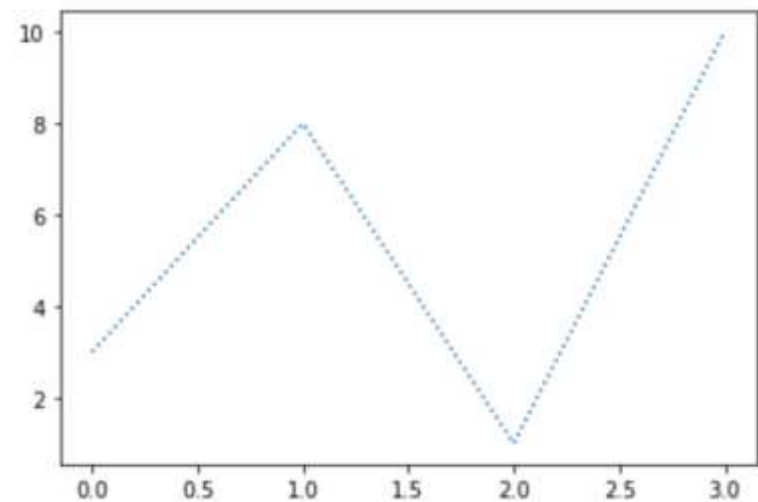
# 예제 입력 후, 실행 여부 확인

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```
import matplotlib.pyplot as plt  
import numpy as np
```

```
y = np.array([3, 8, 1, 10])
```

```
plt.plot(y, ls = ':')  
plt.show()
```





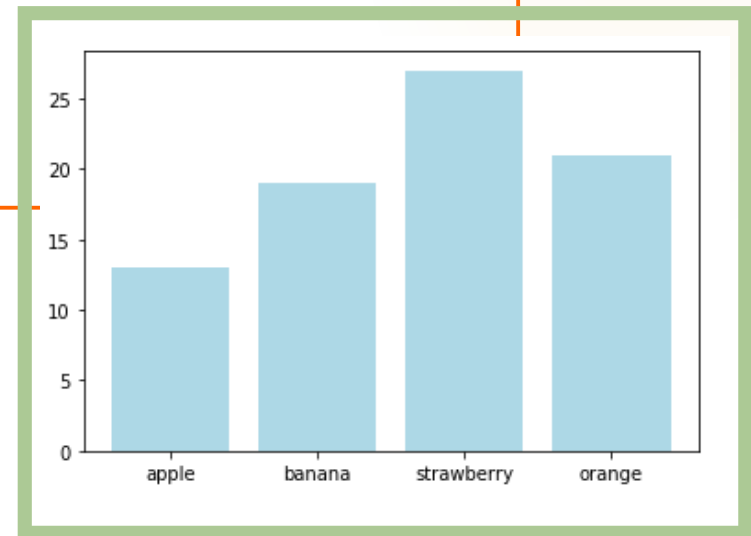
# Bar 예제

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```
import matplotlib.pyplot as plt  
import numpy as np
```

```
x = np.array(["apple", "banana", "strawberry", "orange"])  
y = np.array([13, 19, 27, 21])
```

```
plt.bar(x, y, color = 'lightblue')  
plt.show()
```



# Reference

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- ▶ [https://www.tutorialspoint.com/matplotlib/matplotlib\\_jupyter\\_notebook.htm](https://www.tutorialspoint.com/matplotlib/matplotlib_jupyter_notebook.htm)
- ▶ [https://www.w3schools.com/python/matplotlib\\_intro.asp](https://www.w3schools.com/python/matplotlib_intro.asp)
- ▶ <https://matplotlib.org/stable/index.html>
- ▶ <https://realpython.com/python-matplotlib-guide/>
- ▶ <https://datascienceschool.net/01%20python/05.02%20%E7%A7%B7%ED%94%8C%EB%A1%AF%EB%A6%AC%EB%B8%8C%EC%9D%98%20%EC%97%AC%EB%9F%AC%EA%B0%80%EC%A7%80%20%ED%94%8C%EB%A1%AF.html>

# 강의 요약

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- ▶ Matplotlib 특징 이해하기
- ▶ Matplotlib 설치

# 목표 달성 질문

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- ▶ Matplotlib 설치 시 사용하는 명령어를 쓰시오

# 감사합니다

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