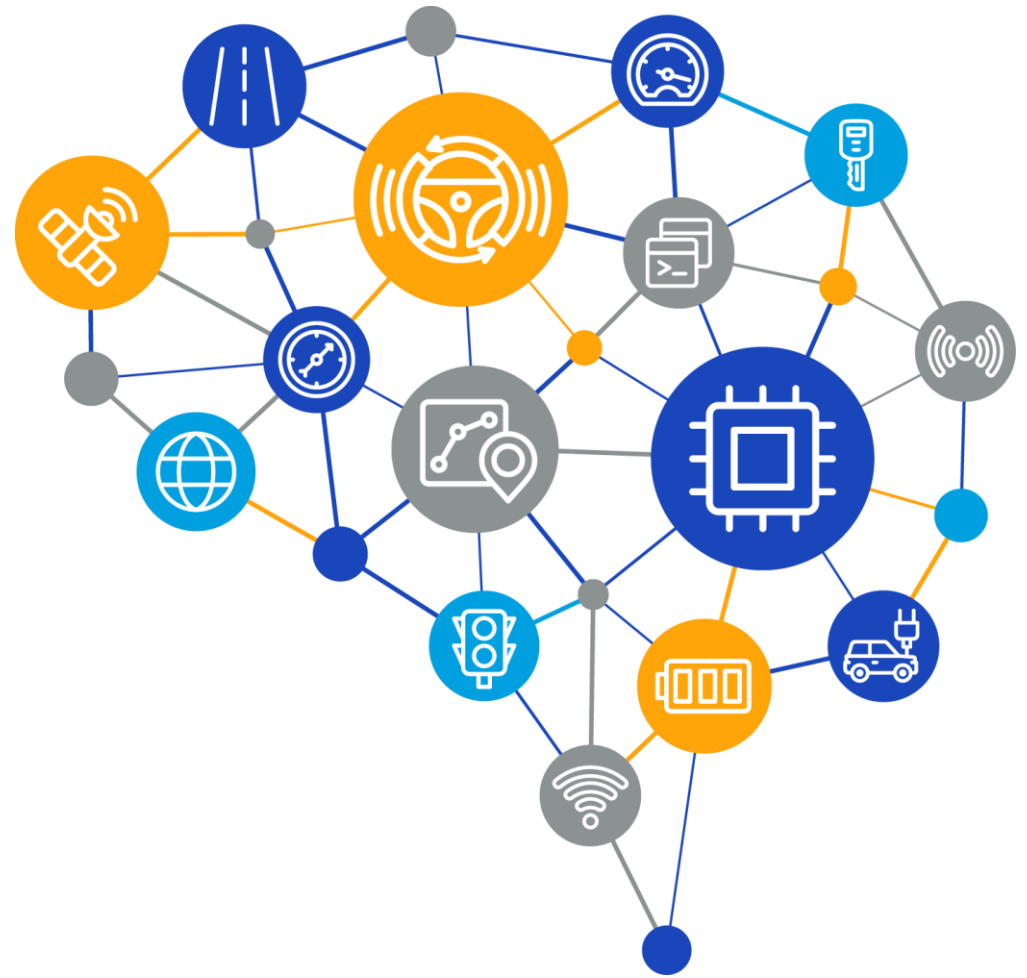


코드스페이스 템플릿 저장소 생성 후 코드스페이스 생성

강환수 교수

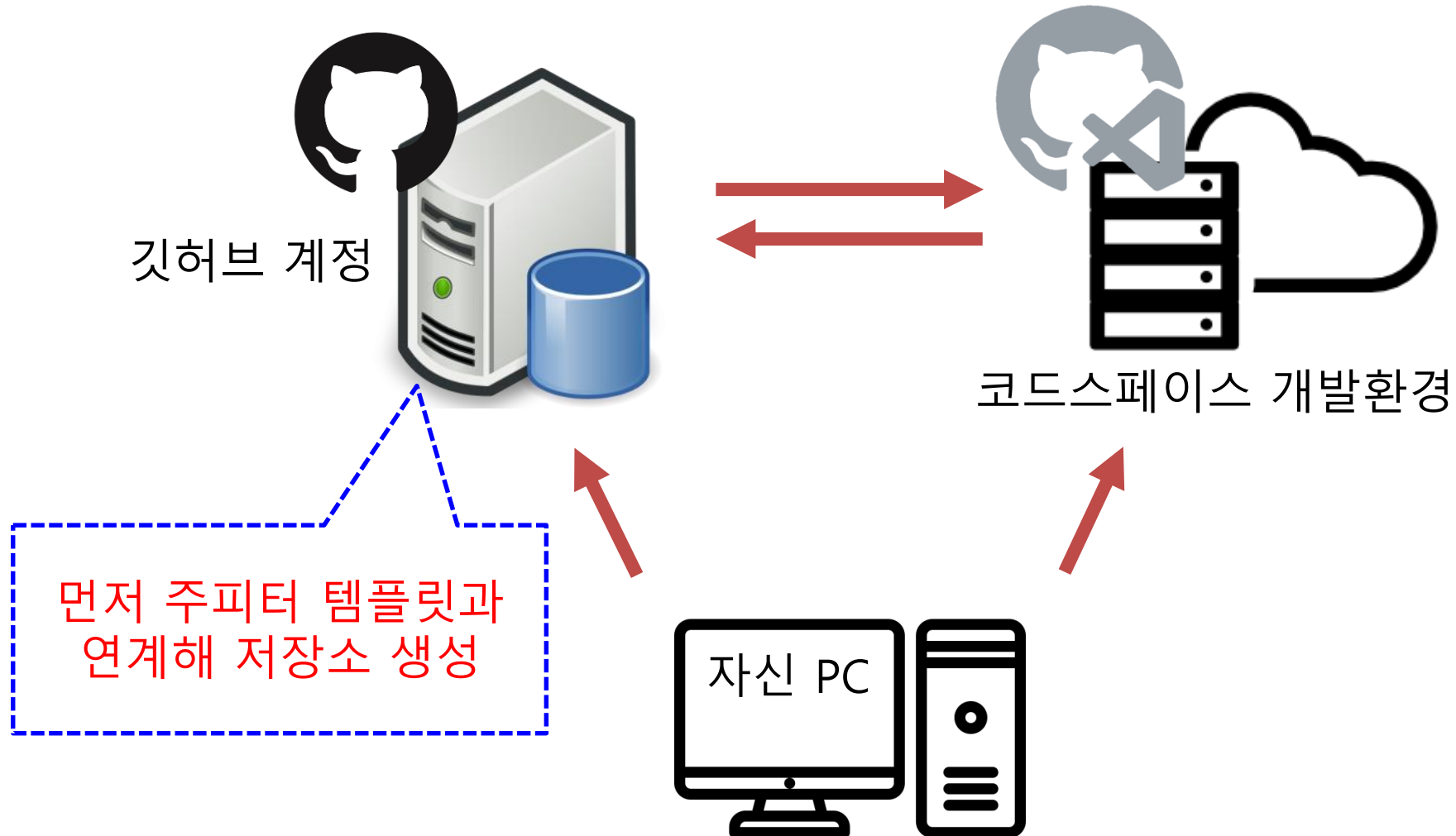


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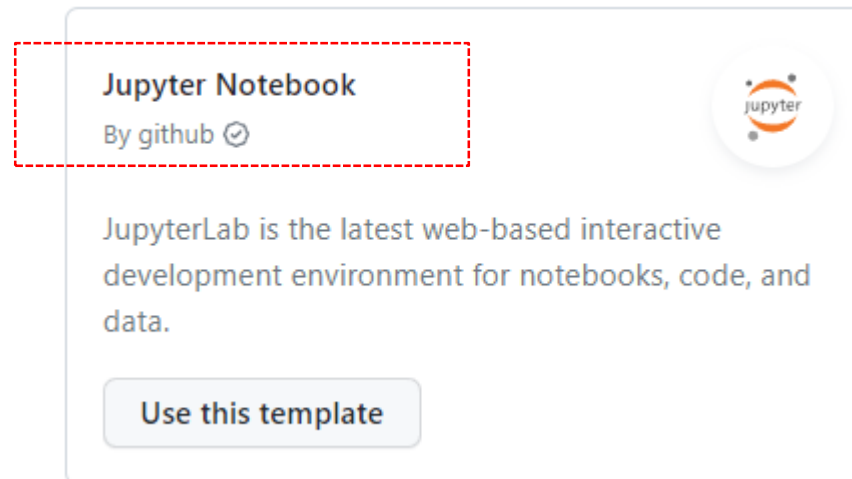
01

코드스페이스 주피터 접속

- 깃허브에서 실행하는 클라우드 개발환경



- 파이썬의 주피터 노트북을 지원하는 템플릿
 - Jupyter Notebook 클릭



- <https://github.com/github/codespaces-jupyter>

The screenshot shows the GitHub repository page for `codespaces-jupyter`, which is a public template. The repository has 61 watches, 701 forks, and 378 stars. The main branch is selected, showing 2 branches and 0 tags. A list of files and their commit history is displayed:

File	Commit Message	Time Ago
<code>.devcontainer</code>	Update devcontainer.json	7 months ago
<code>data</code>	Add interactive notebook	9 months ago
<code>notebooks</code>	Fix axis titles	8 months ago
<code>.gitignore</code>	Add .ipynb_checkpoints/ to .gitignore	8 months ago
<code>LICENSE</code>	Initial commit	last year
<code>README.md</code>	Update SCM tip.	9 months ago
<code>requirements.txt</code>	Revert "Bump torch from 1.12.1 to 1.13.1"	5 months ago

The README section is titled "GitHub Codespaces ❤️ Jupyter Notebooks" and contains the following text:

Welcome to your shiny new codespace! We've got everything fired up and running for you to explore Python and Jupyter notebooks.

You've got a blank canvas to work on from a git perspective as well. There's a single initial commit with what you're seeing right now - where you go from here is up to you!

Everything you do here is contained within this one codespace. There is no repository on GitHub yet. If and when you're ready you can click "Publish Branch" and we'll create your repository and push up your project. If you were just exploring then and have no further need for this code then you can simply delete your codespace and it's gone forever.

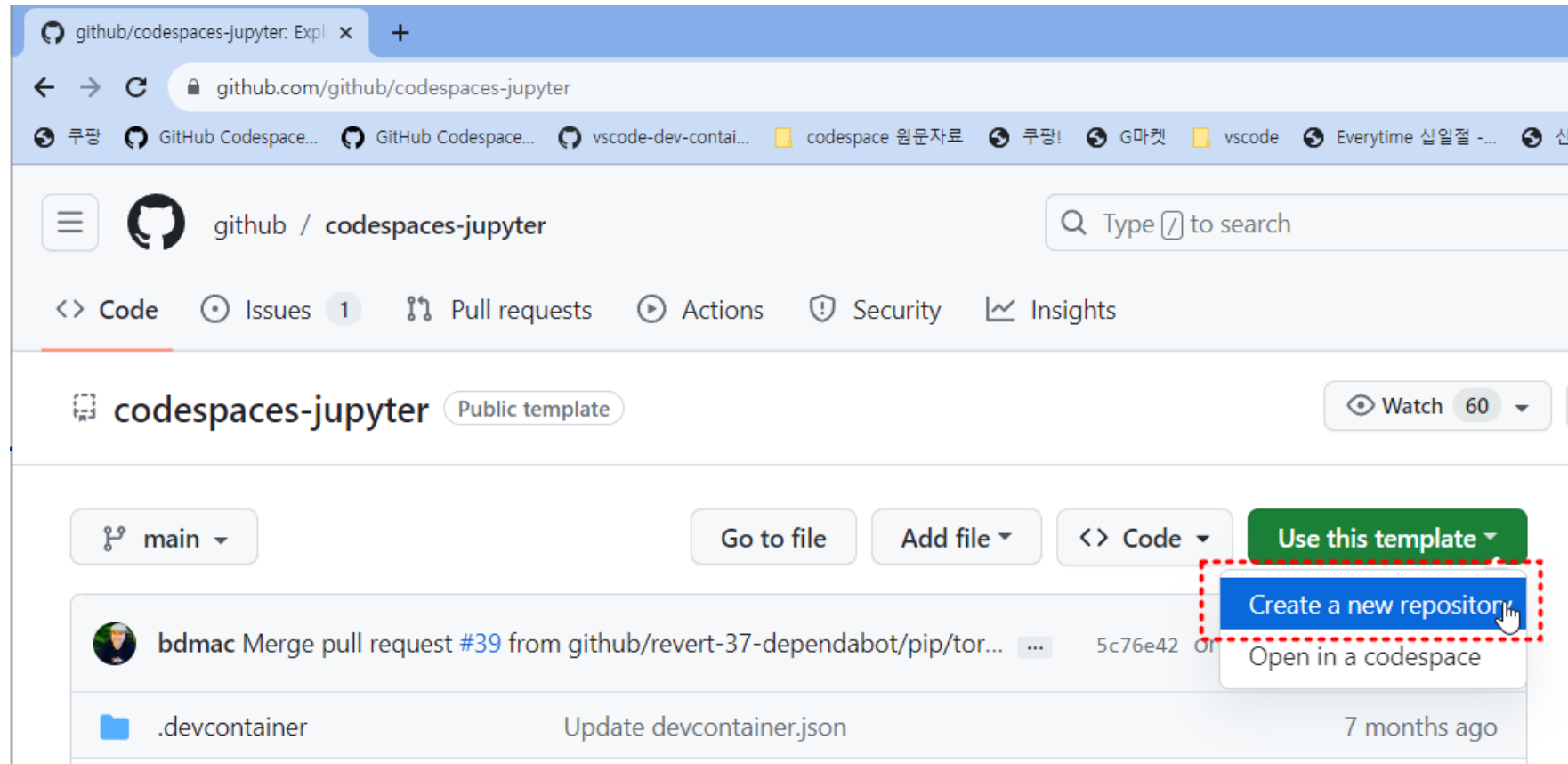
The right sidebar shows the repository's activity, including a list of contributors (7) and a language usage chart showing 100% Jupyter Notebook.

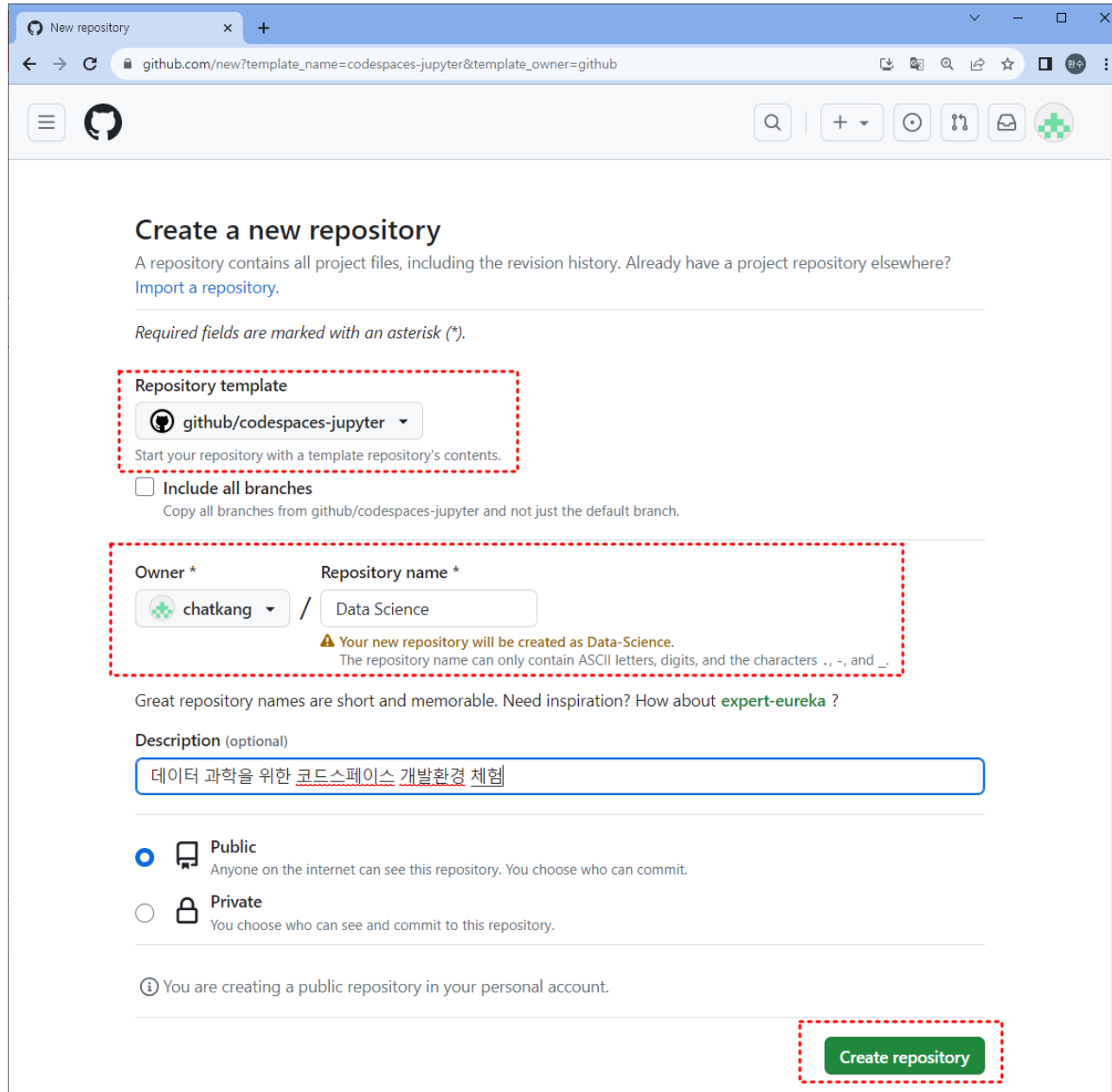
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02

코드스페이스 템플릿을 사용해
저장소 생성

- **[Create a new repository]를 선택**
 - 템플릿의 내용을 그대로 복제한 저장소를 생성하기 위해





New repository

github.com/new?template_name=codespaces-jupyter&template_owner=github

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere?
[Import a repository.](#)

Required fields are marked with an asterisk (*).

Repository template

github/codespaces-jupyter

Start your repository with a template repository's contents.

☐ Include all branches
Copy all branches from github/codespaces-jupyter and not just the default branch.

Owner * chatkang / **Repository name *** Data Science

⚠ Your new repository will be created as Data-Science.
The repository name can only contain ASCII letters, digits, and the characters ., -, and _.

Great repository names are short and memorable. Need inspiration? How about **expert-eureka** ?

Description (optional)

데이터 과학을 위한 코드스페이스 개발환경 체험

☒ **Public**
Anyone on the internet can see this repository. You choose who can commit.

☐ **Private**
You choose who can see and commit to this repository.

ⓘ You are creating a public repository in your personal account.

Create repository

- 주인은 자신

chatkang / Data-Science

Type to search

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

Data-Science Public

generated from github/codespaces-jupyter

main 1 branch 0 tags

Go to file Add file <> Code

chatkang Initial commit 4c7b405 1 minute ago 1 commit

.devcontainer	Initial commit	1 minute ago
data	Initial commit	1 minute ago
notebooks	Initial commit	1 minute ago
.gitignore	Initial commit	1 minute ago
LICENSE	Initial commit	1 minute ago
README.md	Initial commit	1 minute ago
requirements.txt	Initial commit	1 minute ago

README.md

GitHub Codespaces ❤️ Jupyter Notebooks

Welcome to your shiny new codespace! We've got everything fired up and running for you to explore Python and Jupyter notebooks.

You've got a blank canvas to work on from a git perspective as well. There's a single initial commit with what you're seeing right now - where you go from here is up to you!

About

데이터 과학을 위한 코드스페이스 개발 환경 체험

- Readme
- MIT license
- Activity
- 0 stars
- 1 watching
- 0 forks

Releases



No releases published
[Create a new release](#)

Packages

No packages published
[Publish your first package](#)

Languages

Jupyter Notebook 100.0%

 chatkang Update README.md 376efbc · now  History

Preview Code Blame

 7 lines (4 loc) · 719 Bytes


Raw Copy Download Edit

GitHub Codespaces ❤️ Jupyter Notebooks by 홍길동

Welcome to your shiny new codespace! We've got everything fired up and running for you to explore Python and Jupyter notebooks.


You've got a blank canvas to work on from a git perspective as well. There's a single initial commit with what you're seeing right now - where you go from here is up to you!

Everything you do here is contained within this one codespace. There is no repository on GitHub yet. If and when you're ready you can click "Publish Branch" and we'll create your repository and push up your project. If you were just exploring then and have no further need for this code then you can simply delete your codespace and it's gone forever.

 **Data-Science** Public

generated from [github/codespaces-jupyter](#)

 Pin

 Unwatch 1

 main ▾


 1 branch

 0 tags


Go to file


Add file ▾

 Code ▾

 chatkang Update README.md


376efbc 1 minute ago

 2 commits

 .devcontainer


Initial commit

3 minutes ago

 data

Initial commit


3 minutes ago


 notebooks

Initial commit

3 minutes ago

Commits

 main ▾

 Commits on Jul 29, 2023

Update README.md

 chatkang committed 2 minutes ago

Verified



376efbc



Initial commit

 chatkang committed 4 minutes ago

Verified



4c7b405



Newer

Older

• 파일 차이

Commit

Update README.md

main

[Browse files](#)

chatkang committed now Verified

1 parent 4c7b405 commit 376efbc

Showing 1 changed file with 1 addition and 1 deletion.

Split

Unified

2 README.md

<> ...

... @@ -1,4 +1,4 @@

1 - # GitHub Codespaces ♥ Jupyter Notebooks

2

3 Welcome to your shiny new codespace! We've got everything fired up and

4 running for you to explore Python and Jupyter notebooks.

.....

↓

1 + # GitHub Codespaces ♥ Jupyter Notebooks by 홍길동

2

3 Welcome to your shiny new codespace! We've got everything fired up and

4 running for you to explore Python and Jupyter notebooks.

DMUAI 동양미래대학교
인공지능소프트웨어학과

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The Future

03

코드스페이스 생성









코드스페이스 생성

오픈소스 소프트웨어를 위한 깃과 깃허브 Python language

 **Data-Science** Public Pin Unwatch 1

generated from [github/codespaces-jupyter](#)

main 1 branch 0 tags Go to file Add file <> Code

 chatkang	Update README.md
	.devcontainer Initial commit
	data Initial commit
	notebooks Initial commit
	.gitignore Initial commit
	LICENSE Initial commit
	README.md Update README.
	requirements.txt Initial commit

Local **Codespaces**

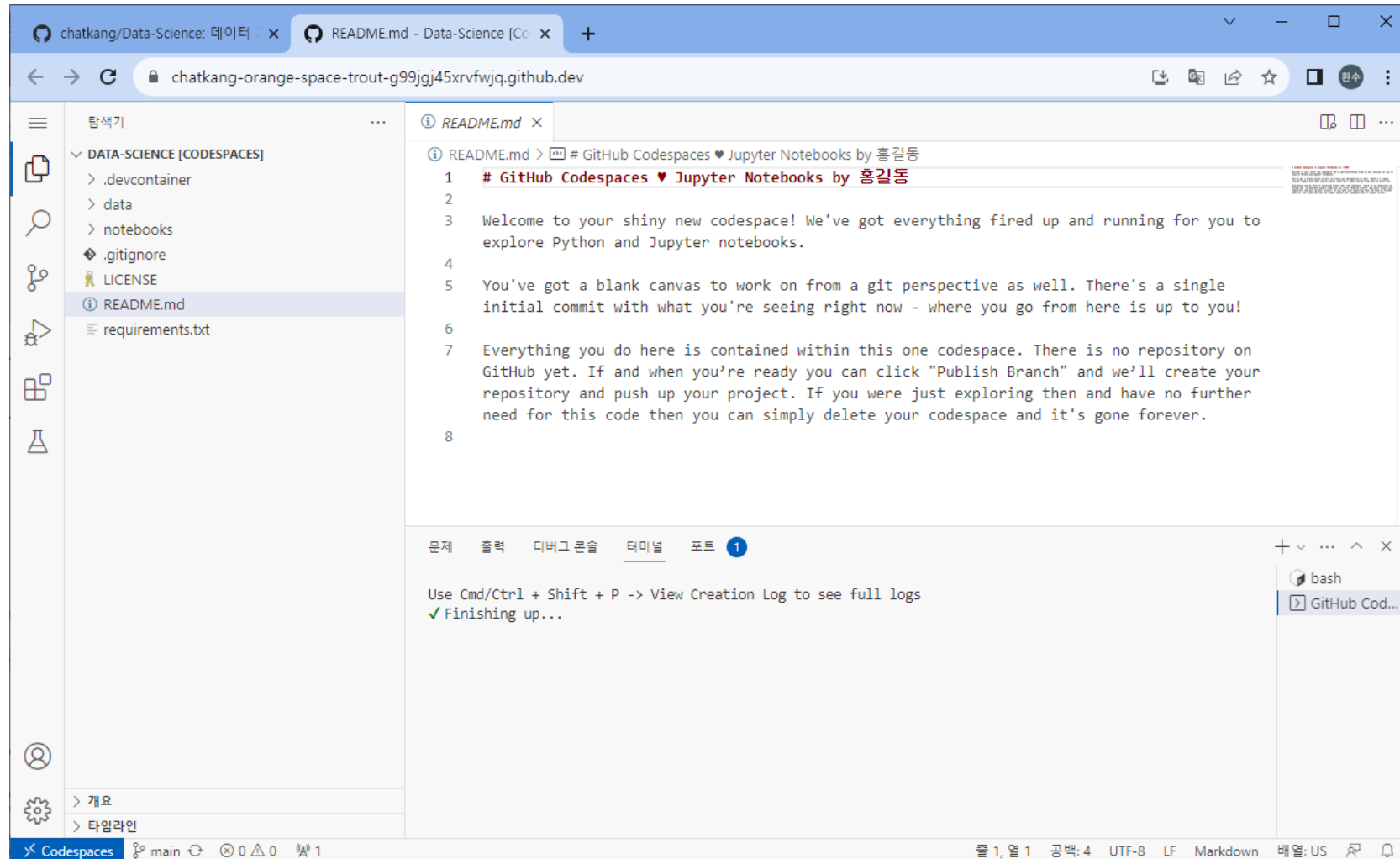
Codespaces
Your workspaces in the cloud

No codespaces
You don't have any codespaces with this repository checked out

[Create codespace on main](#)

[Learn more about codespaces...](#)

Codespace usage for this repository is paid for by chatkang

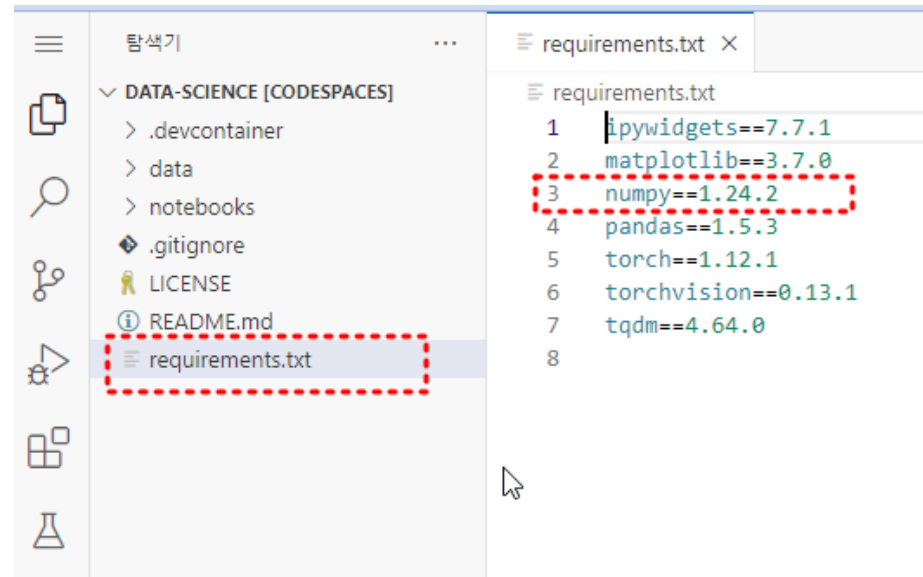


• 파일 구성

- 폴더이름: DATA_SCIENCE [CODESPACES]
- 3개의 폴더
- 여러 개의 파일



- 모듈 numpy 확인
 - pip show numpy



```
문제  출력  디버그 콘솔  터미널  포트 1

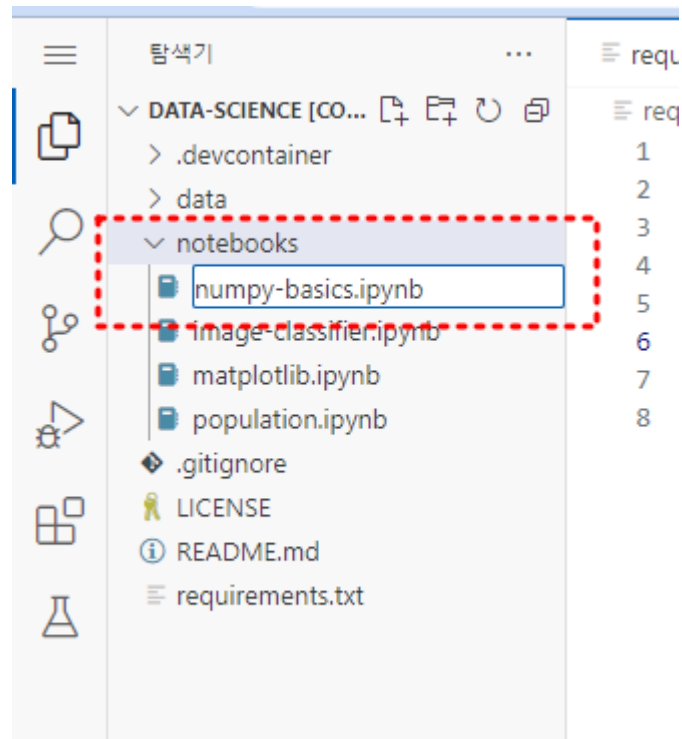
• @chatkang →/workspaces/Data-Science (main) $ pip show numpy
Name: numpy
Version: 1.24.2
Summary: Fundamental package for array computing in Python
Home-page: https://www.numpy.org
Author: Travis E. Oliphant et al.
Author-email:
License: BSD-3-Clause
Location: /opt/python/3.10.8/lib/python3.10/site-packages
Requires:
Required-by: contourpy, matplotlib, pandas, scikit-learn, scipy, seaborn, torchvision
○ @chatkang →/workspaces/Data-Science (main) $
```

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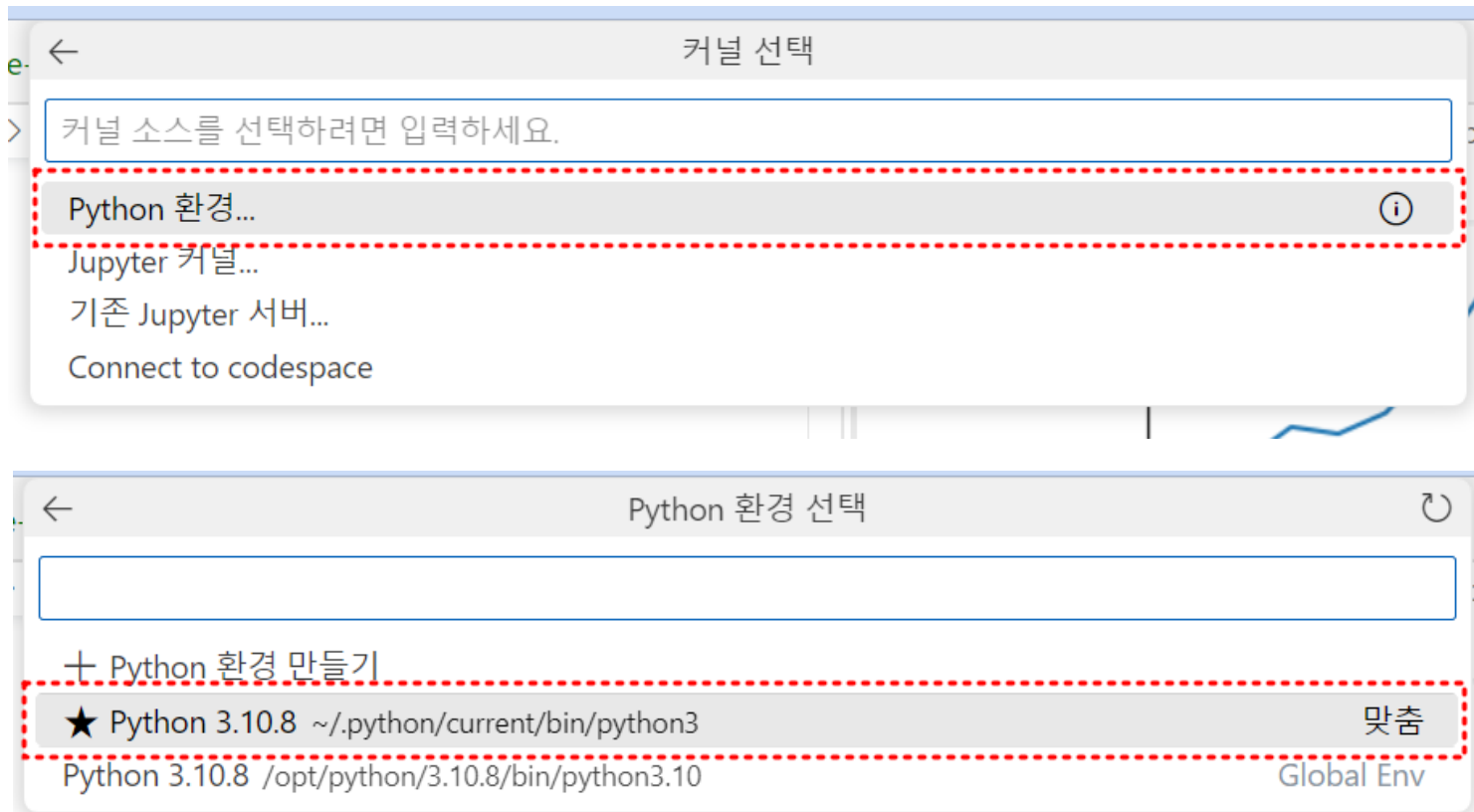
04

주피터 노트북 실행

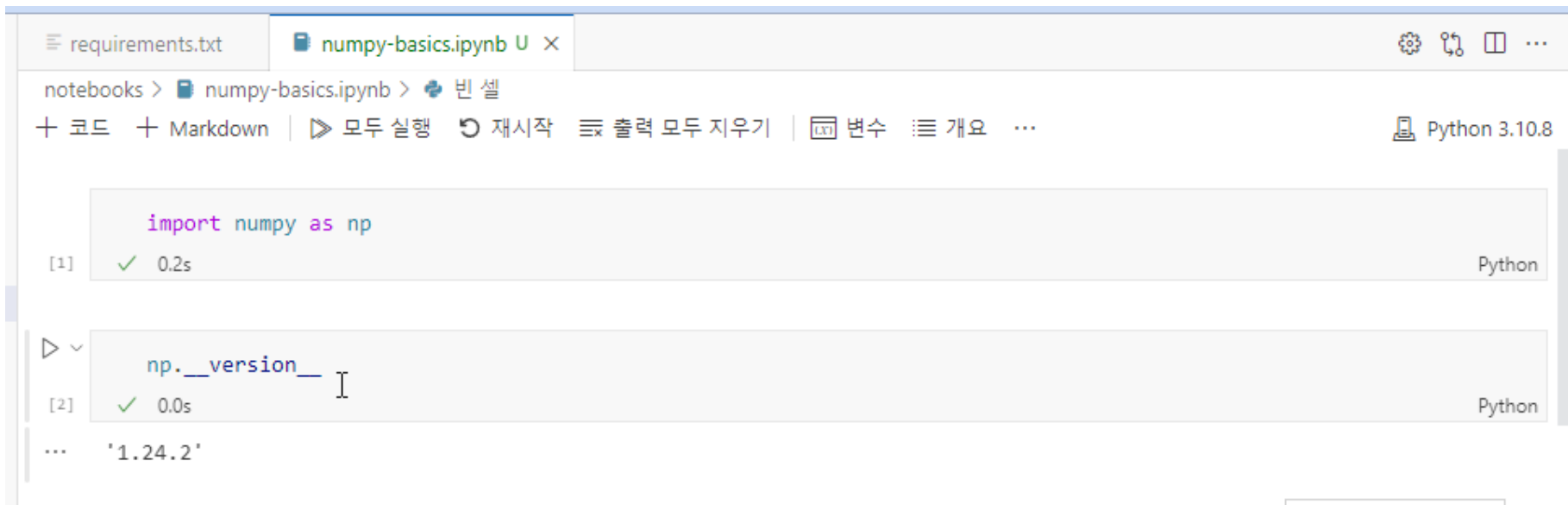
- 파일
 - notebooks/numpy-basics.ipynb
 - Numpy로 이름을 명명하지 않도록



- 셀에서
 - Shift + enter



- 명령 모드
 - C v
- 셀 나누기
 - Ctrl + shift + -
- 셀 실행
 - Ctrl + shift



```
requirements.txt numpy-basics.ipynb U x
```

notebooks > numpy-basics.ipynb > 빈 셀

+ 코드 + Markdown | ▶ 모두 실행 ↺ 재시작 ≡ 출력 모두 지우기 | 변수 개요 ... Python 3.10.8

```
[1] import numpy as np
```

✓ 0.2s Python

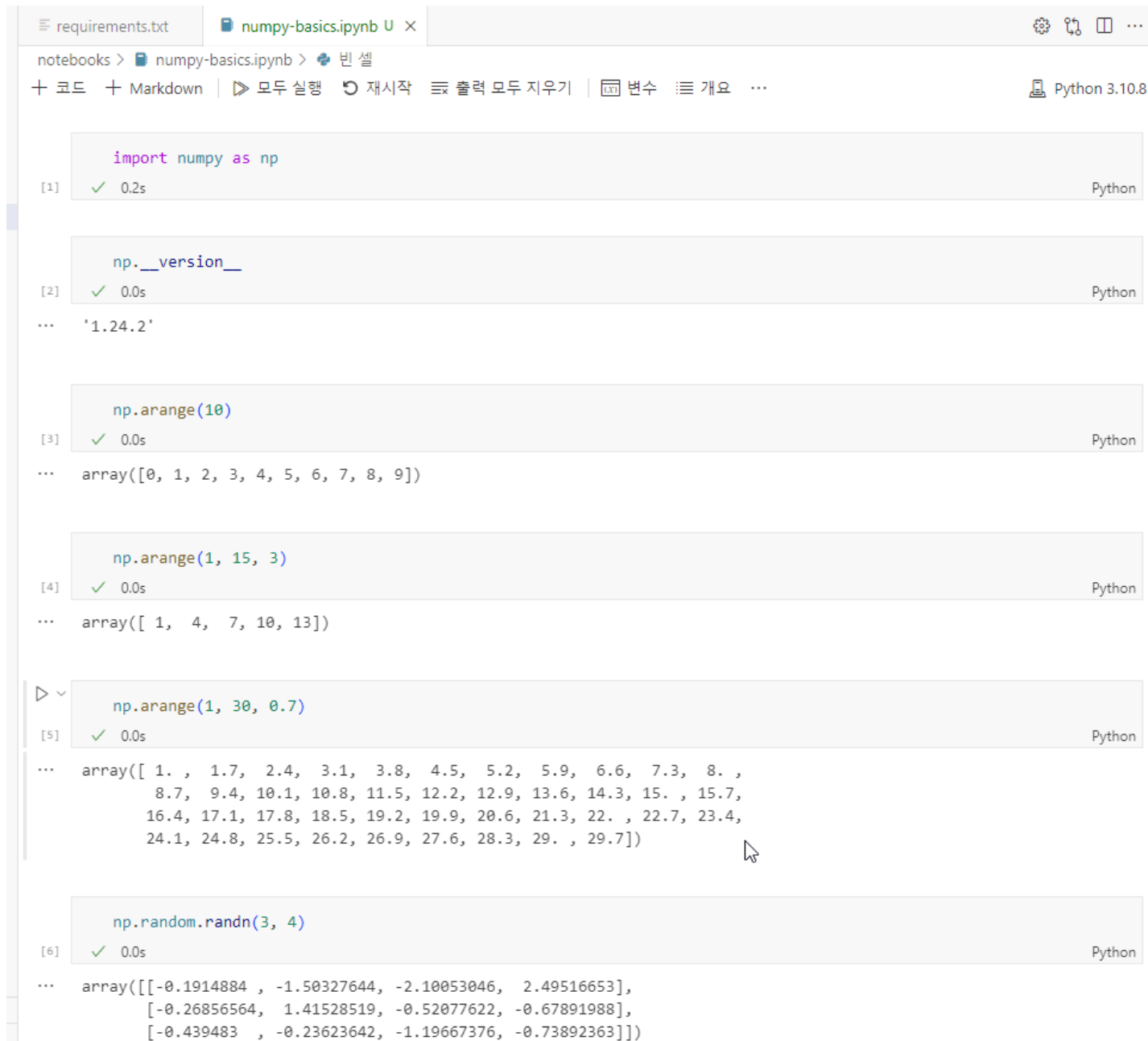
```
[2] np.__version__
```

✓ 0.0s Python

... '1.24.2'

다음 코딩을 2-3회의 커밋을 하도록

오픈소스 소프트웨어를 위한 깃과 깃허브 Python language



The screenshot displays a Jupyter Notebook titled 'numpy-basics.ipynb'. The interface includes a top bar with file tabs for 'requirements.txt' and 'numpy-basics.ipynb'. Below the tabs, the notebook's content area shows a series of code cells, each with a prompt number, a green checkmark indicating successful execution, and a 'Python' label. The code cells contain the following Python code:

```
[1] import numpy as np
```

```
[2] np.__version__
```

```
[3] np.arange(10)
```

```
[4] np.arange(1, 15, 3)
```

```
[5] np.arange(1, 30, 0.7)
```

```
[6] np.random.randn(3, 4)
```

The output for the fifth cell is displayed as a multi-line array:

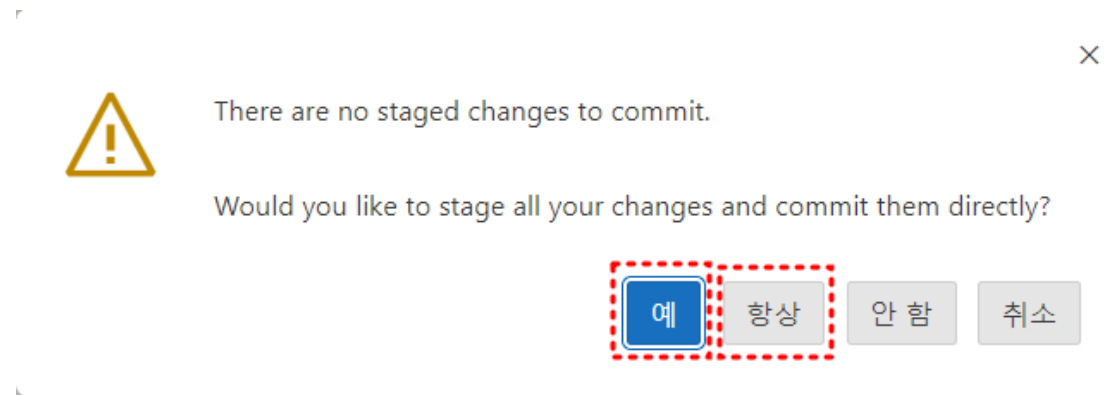
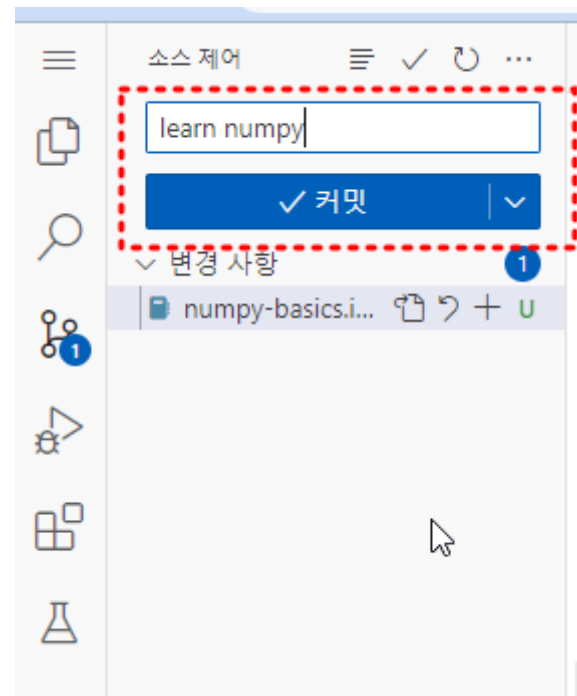
```
array([ 1. ,  1.7,  2.4,  3.1,  3.8,  4.5,  5.2,  5.9,  6.6,  7.3,  8. ,  
       8.7,  9.4, 10.1, 10.8, 11.5, 12.2, 12.9, 13.6, 14.3, 15. , 15.7,  
      16.4, 17.1, 17.8, 18.5, 19.2, 19.9, 20.6, 21.3, 22. , 22.7, 23.4,  
      24.1, 24.8, 25.5, 26.2, 26.9, 27.6, 28.3, 29. , 29.7])
```

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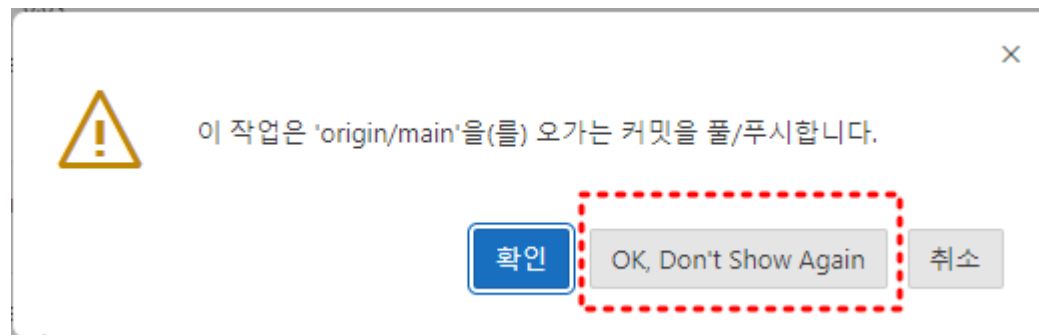
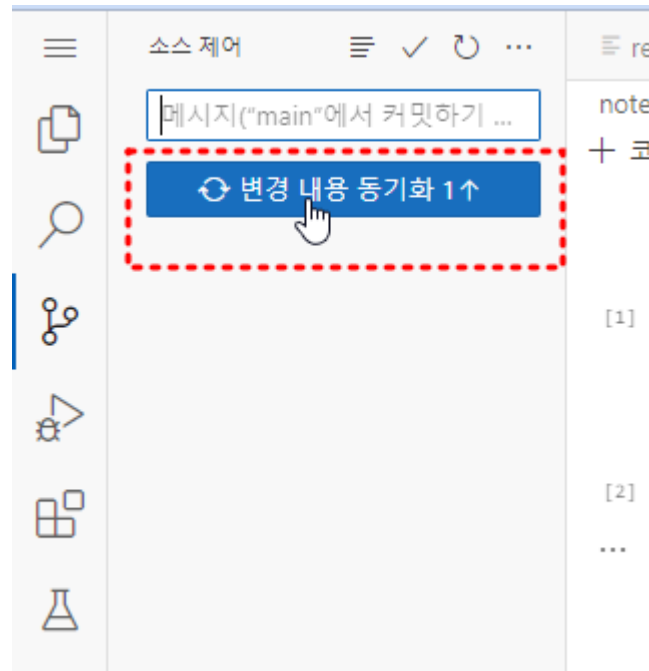
05

코드스페이스 저장소를 깃허브에 push

- 메시지 작성



- push



자신의 깃허브 저장소 확인

오픈소스 소프트웨어를 위한 깃과 깃허브 Python language

The screenshot shows a GitHub repository page for 'Data-Science/numpy'. The repository is owned by 'chatkang'. The file 'numpy-basics.ipynb' is selected, showing its code. The code is a Jupyter notebook with several input/output pairs. The repository path 'chatkang / Data-Science' and the file path 'Data-Science / notebooks / numpy-basics.ipynb' are highlighted with red dashed boxes. The code includes imports, version checks, and various numpy array operations.

```
In [1]: import numpy as np

In [2]: np.__version__

Out[2]: '1.24.2'

In [3]: np.arange(10)

Out[3]: array([0, 1, 2, 3, 4, 5, 6, 7, 8, 9])

In [4]: np.arange(1, 15, 3)

Out[4]: array([ 1,  4,  7, 10, 13])

In [5]: np.arange(1, 30, 0.7)

Out[5]: array([ 1. ,  1.7,  2.4,  3.1,  3.8,  4.5,  5.2,  5.9,  6.6,  7.3,  8. ,
        8.7,  9.4, 10.1, 10.8, 11.5, 12.2, 12.9, 13.6, 14.3, 15. , 15.7,
       16.4, 17.1, 17.8, 18.5, 19.2, 19.9, 20.6, 21.3, 22. , 22.7, 23.4,
       24.1, 24.8, 25.5, 26.2, 26.9, 27.6, 28.3, 29. , 29.7])

In [6]: np.random.randn(3, 4)

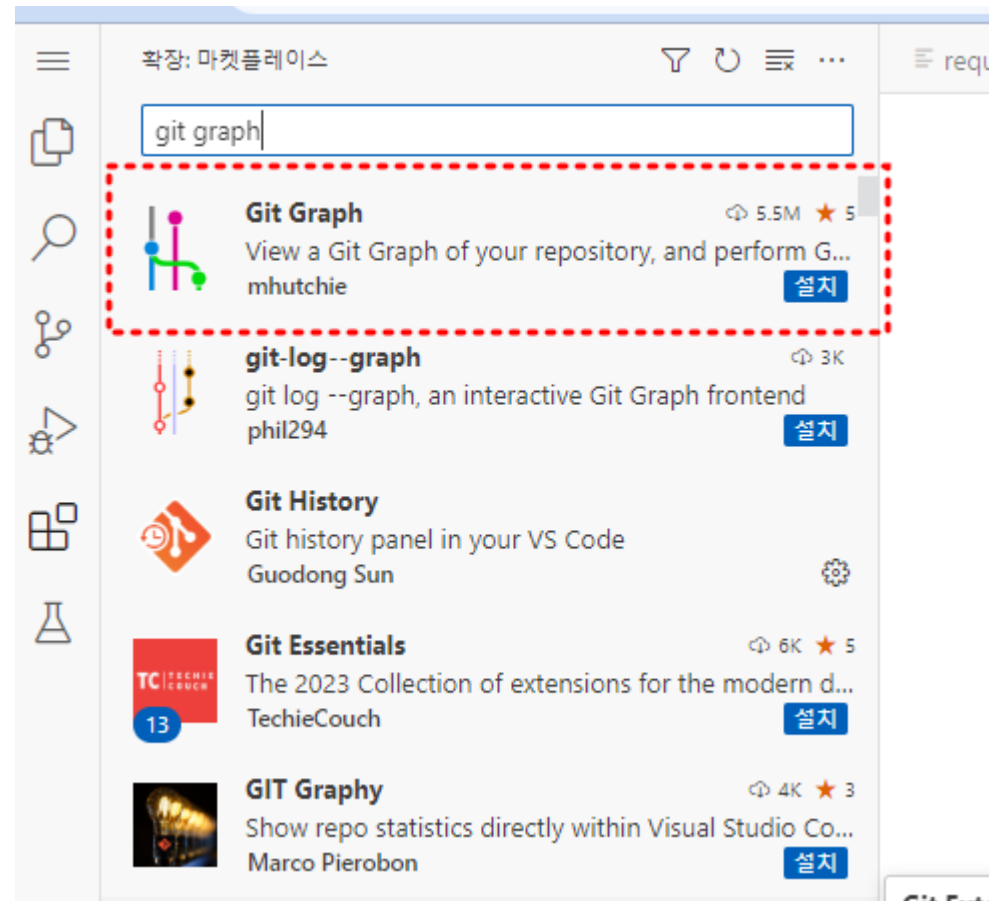
Out[6]: array([[ -0.1914884 , -1.50327644, -2.10053046,  2.49516653],
               [-0.26856564,  1.41528519, -0.52077622, -0.67891988],
               [-0.439483  , -0.23623642, -1.19667376, -0.73892363]])

In [ ]:
```

• 커밋

The screenshot shows a web browser window with the URL `chatkang-orange-space-trout-g99jgj45xrvfwjq.github.dev`. The interface is a Jupyter Notebook editor. On the left, there's a sidebar with a search bar containing the text `reshape` and a button labeled `✓ 커밋` (Commit). Below the search bar, it says `변경 사항` (Changes) with a count of `1`. The main area shows a Jupyter Notebook with several code cells. The first cell contains `np.arange(12)` and its output is `array([0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11])`. The second cell contains `np.arange(12).reshape(3, 4)` and its output is a 3x4 array. The third cell contains `np.arange(12).reshape(2, 6)` and its output is a 2x6 array. The fourth cell contains `np.arange(12).reshape(6, 2)` and its output is a 6x2 array. The bottom of the interface shows a play button and a dropdown menu.

- Git graph



버전 확인

오픈소스 소프트웨어를 위한 깃과 깃허브 Python language

소스 제어

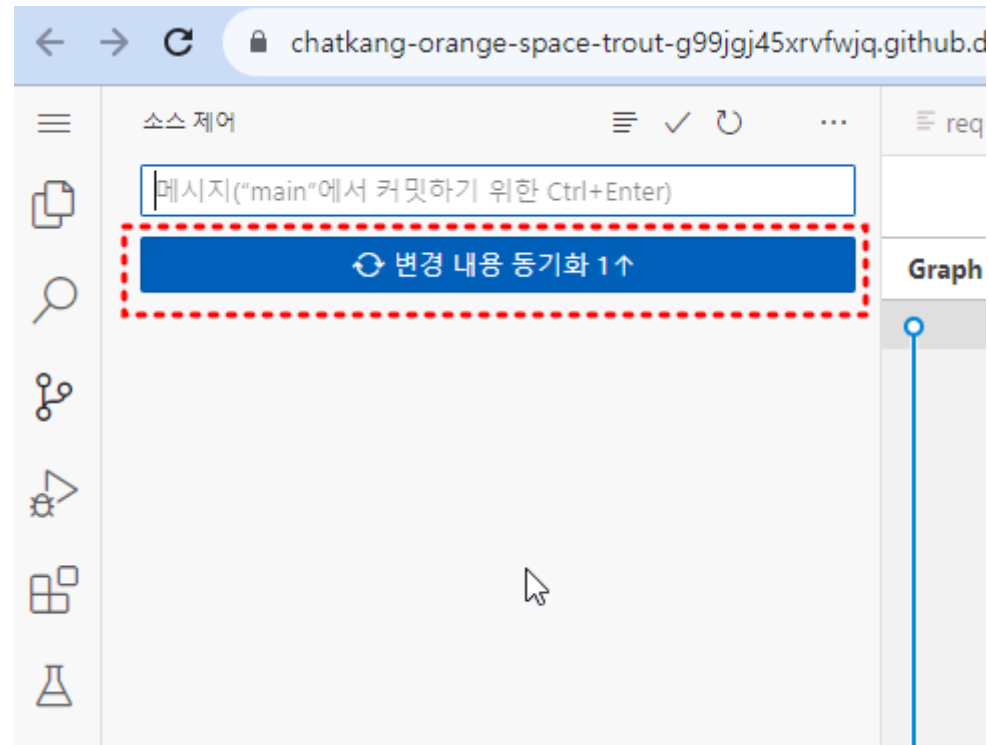
메시지("main"에서 커밋하기 위한 Ctrl+Enter)

변경 내용 동기화 1↑

requirements.txt numpy-basics.ipynb Git Graph X numpy-basics.ipynb (44b01a3c^ ← 44b01a3c)

Branches: Show All Show Remote Branches

Graph	Description	Date	Author	Commit
main	reshape	29 Jul 2023 12:24	chatkang	44b01a3c
Commit: 44b01a3cb2464d6d4214296f8f89874df4d51a9f Parents: cd0fa75d573ceec2a43b08c352588747a54ecc307 Author: chatkang <126311686+chatkang@users.noreply.github.com> Committer: chatkang <126311686+chatkang@users.noreply.github.com> Date: Sat Jul 29 2023 12:24:01 GMT+0900 (한국 표준시)				
reshape				
notebooks				
numpy-basics.ipynb (+95 -0)				
origin/HEAD	origin/main	learn numpy	29 Jul 2023 12:14	chatkang cd0fa75d
Update README.md				29 Jul 2023 11:55 chatkang 376efbc1
Initial commit				29 Jul 2023 11:53 chatkang 4c7b4055



- 깃허브에서 파일 변화 확인

