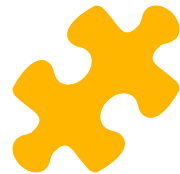




Basics of CO lab



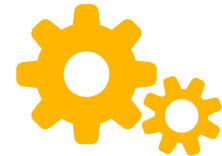
Welcome to ML!

I am Dongmin Kang

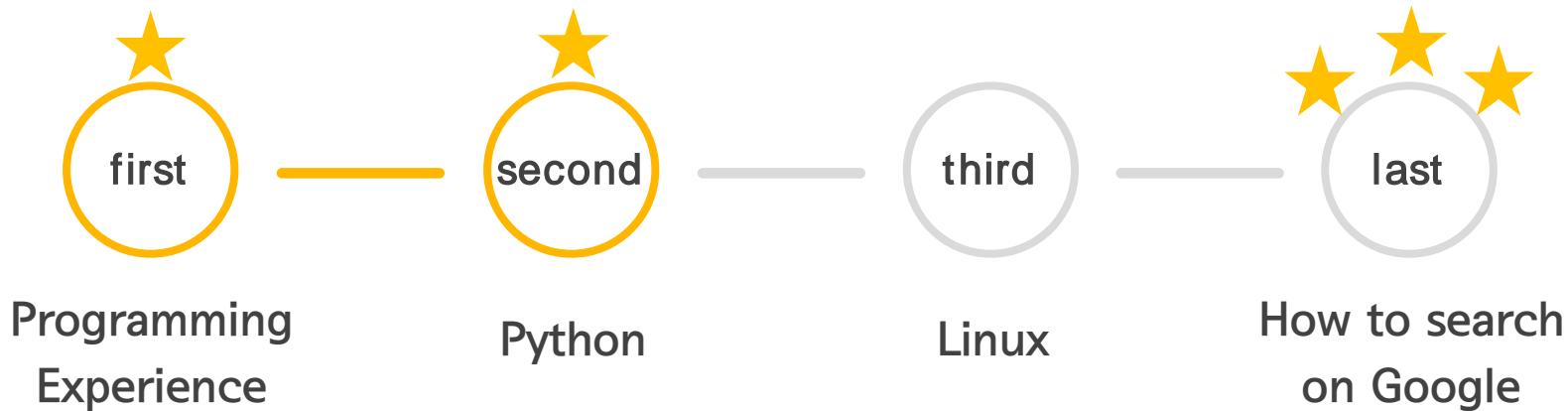
I am here because I am a TA

- Contact Info -

E-mail: skydmk21@gist.ac.kr




Before **start**



How to start your Colab

Create you google account





Google 계정 만들기

성
gist

이름
ML

사용자 이름
gistML.2018fall@gmail.com

문자, 숫자, 마침표를 사용할 수 있습니다
[대신 현재 이메일 주소 사용](#)

비밀번호
.....

비밀번호 확인
.....

문자, 숫자, 기호를 조합하여 8자 이상을 사용하세요

[대신 로그인하기](#)

다음

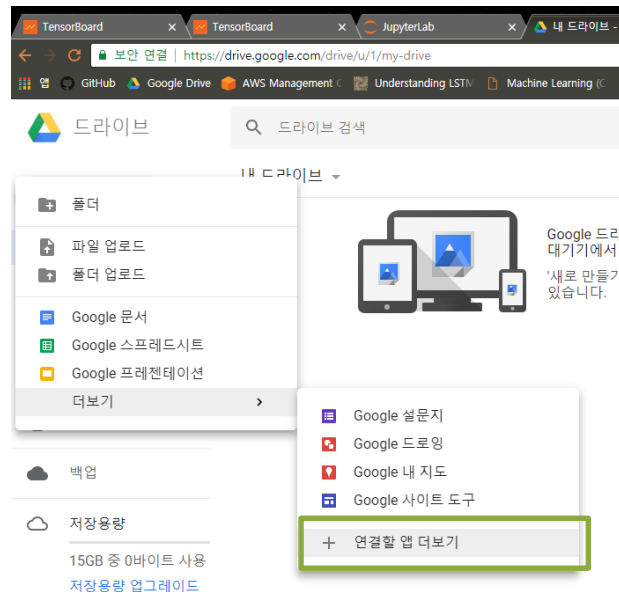
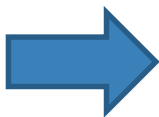
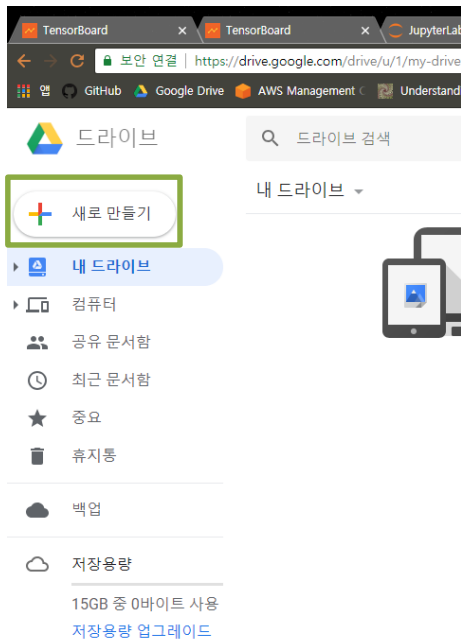


하나의 계정으로 모든 Google 서비스를 이용할 수 있습니다.

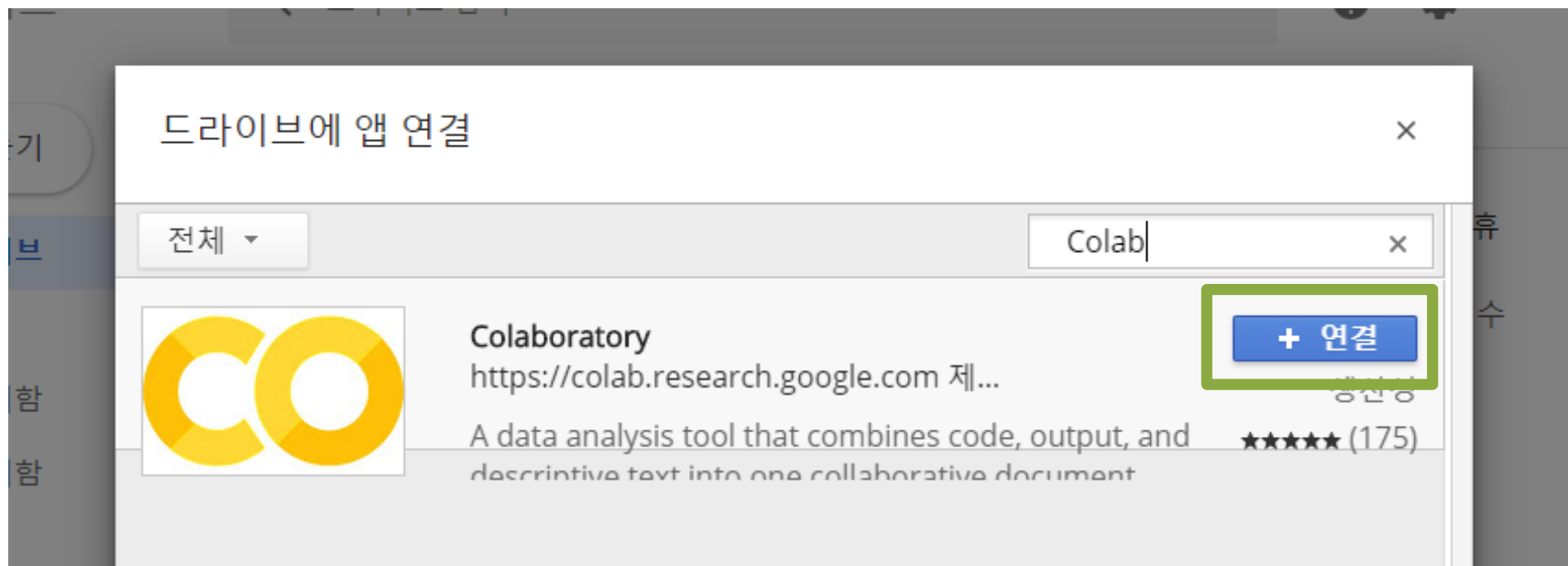
한국어 ▾

[도움말](#) [개인정보 보호](#) [약관](#)

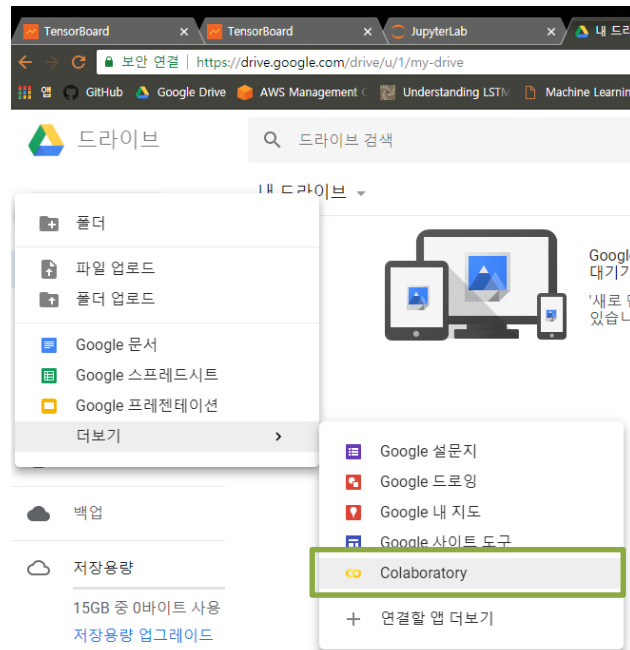
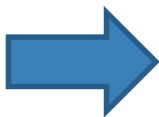
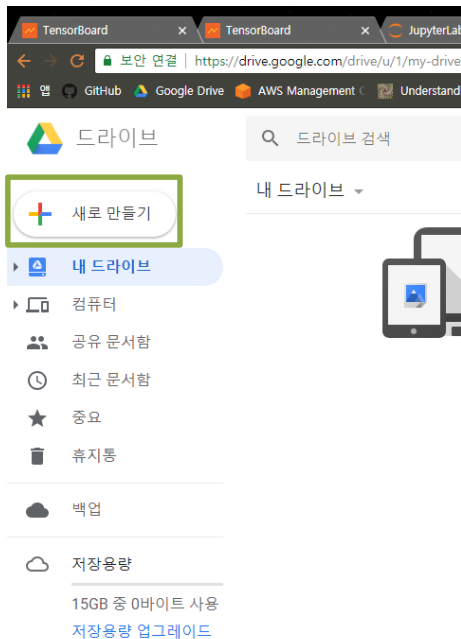
Go to your Google drive



Let's try Colab!



Let's try Colab!



We can use GPU 12h per day



안 연결 | <https://colab.research.google.com/drive/1gpcbhmCKgy7oKC1kFX-k>
Google Drive AWS Management Understanding LSTMv Machine Learning

titled0.ipynb ☆

수정 보기 삽입 런타임 도구 도움말

텍스트

```
print('Hello
```

lo World

모두 실행 Ctrl+F9

이전 셀 실행 Ctrl+F8

초점이 맞춰진 셀 실행 Ctrl+Enter

선택항목 실행 Ctrl+Shift+Enter

이후 셀 실행 Ctrl+F10

실행 중단 Ctrl+M |

런타임 다시 시작... Ctrl+M .

런타임 유형 변경

세션 관리

노트 설정

런타임 유형

Python 3

Python 2

Python 3

하드웨어 가속기

None

☐ 이 노트를 저장할 때 코드 셀 출력 생략

취소

저장

노트 설정

런타임 유형

Python 3

하드웨어 가속기

GPU

None

GPU

☐ 이 노트를 저장할 때 코드 셀 출력 생략

저장

We can use GPU 12h per day



Trick: Stop your kernel
and Close all tabs of your
chrome before 12h

(in my case, it works)



Hello World!



Click or Shift + Enter

A code editor snippet with a light gray background. The top bar has a play button icon on the left and a three-dot menu icon on the right. The main area shows a single line of code: `1 print('Hello World')`. Below the code, there is a white box containing the output: `Hello World`.

Now, You are using remote backend

Tip. Use “!” to use **Linux shell commands** (ls, mkdir, cd, and so on)

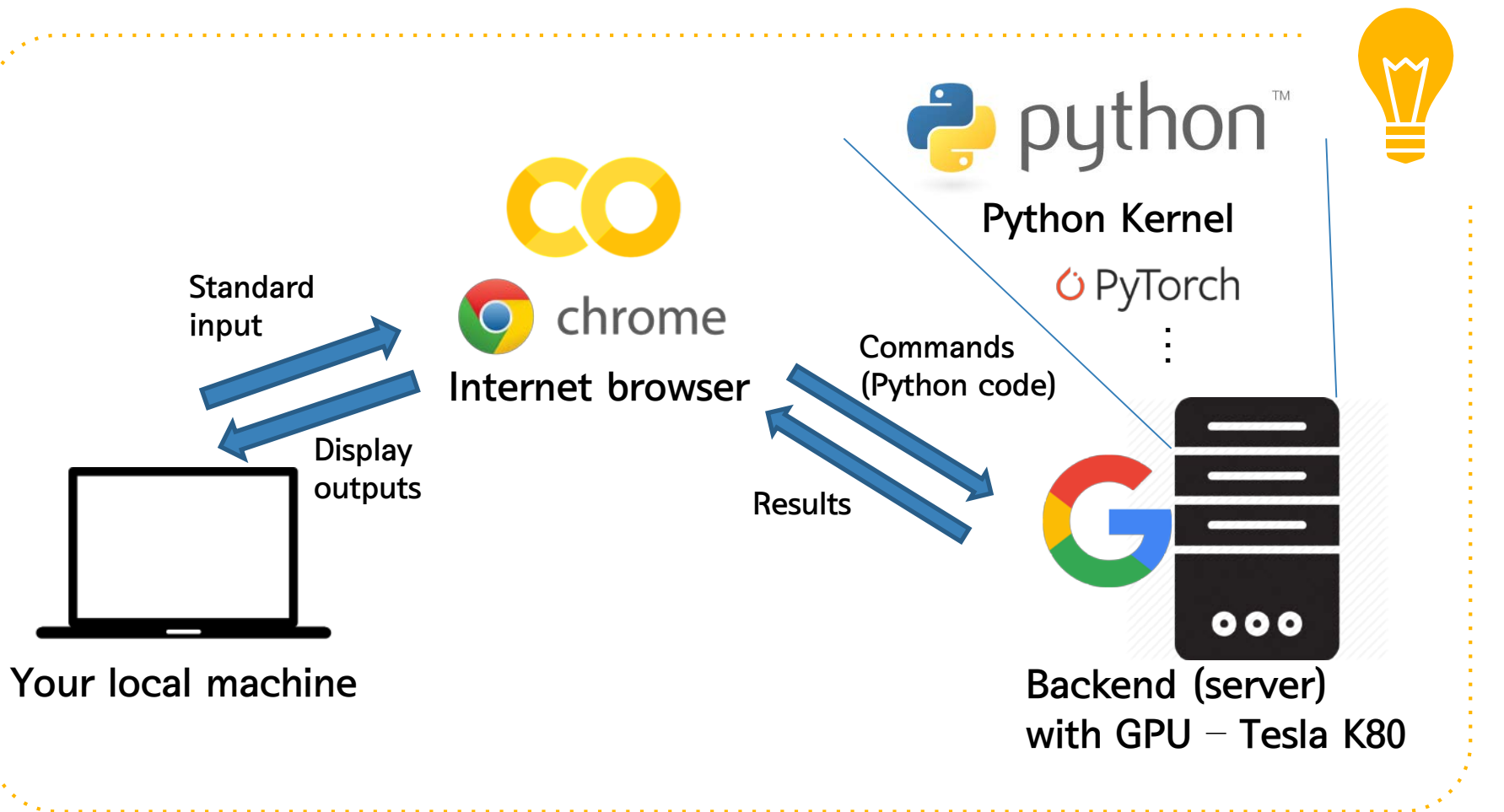


```
[2] 1 | !ls
```

```
[3] 1 | !mkdir test_dir
```

```
[4] 1 | !ls
```

```
↳ test_dir
```





Therefore, You
cannot import your
local files /google
drive files **directly**

How to handle files on colab



Upload files from local

```
1 from google.colab import files  
2 uploaded = files.upload()
```

... 파일 선택 선택된 파일 없음

Cancel upload

```
[9] 1 from google.colab import files  
    2 uploaded = files.upload()
```

📁 파일 선택 something_else.py

• **something_else.py**(text/plain) - 22 bytes, last modified: 2018. 8. 30. - 100% done
Saving something_else.py to something_else.py

```
[10] 1 !ls
```

📁 something_else.py test_dir

Download files to local



```
[12] 1 files.download('something_else.py')
```



```
1 |
```



something_else.py



How to Upload files from Google Drive



The screenshot shows the Google Drive web interface. On the left is a sidebar with the Google Drive logo and the text '드라이브'. Below it is a '새로 만들기' (New) button with a plus icon. A list of navigation options follows: '내 드라이브' (My Drive), '컴퓨터' (Computer), '공유 문서함' (Shared with me), '최근 문서함' (Recent), '중요' (Important), '휴지통' (Trash), and '백업' (Backup). The main area has a search bar '드라이브 검색' and a breadcrumb path '내 드라이브 > Colab Notebooks > Tutorial'. Below the path, the word '파일' (File) is displayed. A large empty box represents the file upload area. At the bottom of this box, a file named 'sthing_else.py' is shown with a blue document icon. To the right of the upload area, a code editor window titled '이 이미지 위에서 "열기" 클릭' (Click "Open" on this image) contains Python code:

```
print('Hello World')  
!  
!  
!mkdir test_dir  
!  
from google.colab import files  
uploaded = files.upload()
```

 Below the code, a file named 'Untitled0.ipynb' is listed with a yellow notebook icon.



Install pyDrive and authenticate

```
[12] 1 !pip -q install pydrive
```



```
1 from pydrive.auth import GoogleAuth
2 from pydrive.drive import GoogleDrive
3 from google.colab import auth
4 from oauth2client.client import GoogleCredentials
5
6 # 1. Authenticate and create the PyDrive client.
7 auth.authenticate_user()
8 gauth = GoogleAuth()
9 gauth.credentials = GoogleCredentials.get_application_default()
10 drive = GoogleDrive(gauth)
```

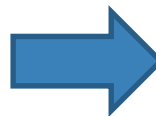
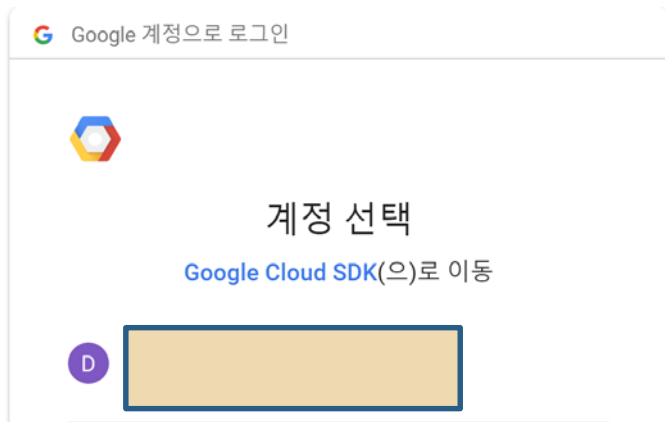
... Go to the following link in your browser:

Click!

https://accounts.google.com/o/oauth2/auth?redirect_uri=urn%3Aietf%3Awg%3Aoauth%3A2.0%3Aandroid

Enter verification code:

Install pyDrive and authenticate



Google Cloud SDK이(가) 내
Google 계정에 액세스하려고 합니
다

Ironluffy95@gmail.com

이렇게 하면 Google Cloud SDK에서 다음 작업을 할
수 있습니다.

- Google 드라이브에서 파일 보기 및 관리 ⓘ
- Google App Engine에 배포된 애플리케이션 조
회 및 관리 ⓘ
- Google Compute Engine 리소스를 조회 및 관
리합니다. ⓘ
- Google 클라우드 플랫폼 서비스 전반에서 데이
터 조회 및 관리 ⓘ

Google Cloud SDK 앱을 신뢰할 수 있는지 확인
민감한 정보가 이 사이트 또는 앱과 공유될 수 있습니다.
Google Cloud SDK의 서비스 약관 및 개인정보처리방침
을 검토하여 내 데이터가 어떻게 처리되는지 알아보세
요. 언제든지 Google 계정에서 액세스 권한을 확인하고
삭제할 수 있습니다.

타사 앱 권한 부여에 관한 위험 알아보기

취소

허용



이 쿠폰을 복사하여 애플리케이션으로 저화하 다음 붙여넣으세요

Copy it!

```
1 from pydrive.auth import GoogleAuth
2 from pydrive.drive import GoogleDrive
3 from google.colab import auth
4 from oauth2client.client import GoogleCredentials
5
6 # 1. Authenticate and create the PyDrive client.
7 auth.authenticate_user()
8 gauth = GoogleAuth()
9 gauth.credentials = GoogleCredentials.get_application_default()
10 drive = GoogleDrive(gauth)
```

... Go to the following link in your browser:

https://accounts.google.com/o/oauth2/auth?redirect_uri=urn%3Aietf%3Auri%3Amailto%3Auser%40example.com

Enter verification code:

Paste here!

Write query about files you want



```
[10] 1 # 2. Auto-iterate using the query syntax
      2 # https://developers.google.com/drive/v2/web/search-parameters
      3
      4 query = "title = 'sthing_else.py'"
      5
      6 file_list = drive.ListFile(
      7     {'q': query}).GetList()
      8 print(file_list)
      9
     10 for f in file_list:
     11     # 3. Create & download by id.
     12     print('title: %s, id: %s' % (f['title'], f['id']))
     13     fname = os.path.join('.', f['title'])
     14     print('downloading to {}'.format(fname))
     15     f_ = drive.CreateFile({'id': f['id']})
     16     f_.GetContentFile(fname)
```

```
↳ [GoogleDriveFile({'kind': 'drive#file', 'id': '1y0GCDuPGiay83iWHpaXbYe2jEB1qq_s_y',
title: sthing_else.py, id: 1y0GCDuPGiay83iWHpaXbYe2jEB1qq_s_y
downloading to ./sthing_else.py
```

```
[11] 1 !ls
```

```
↳ adc.json sample_data sthing_else.py test_dir
```



Thanks!

Any questions?

Sample Code:

<https://colab.research.google.com/drive/1ipbrhY99KKxV-8QiiIXrBsCtEr44YIVG>