



# ChatGPT in Your Colab

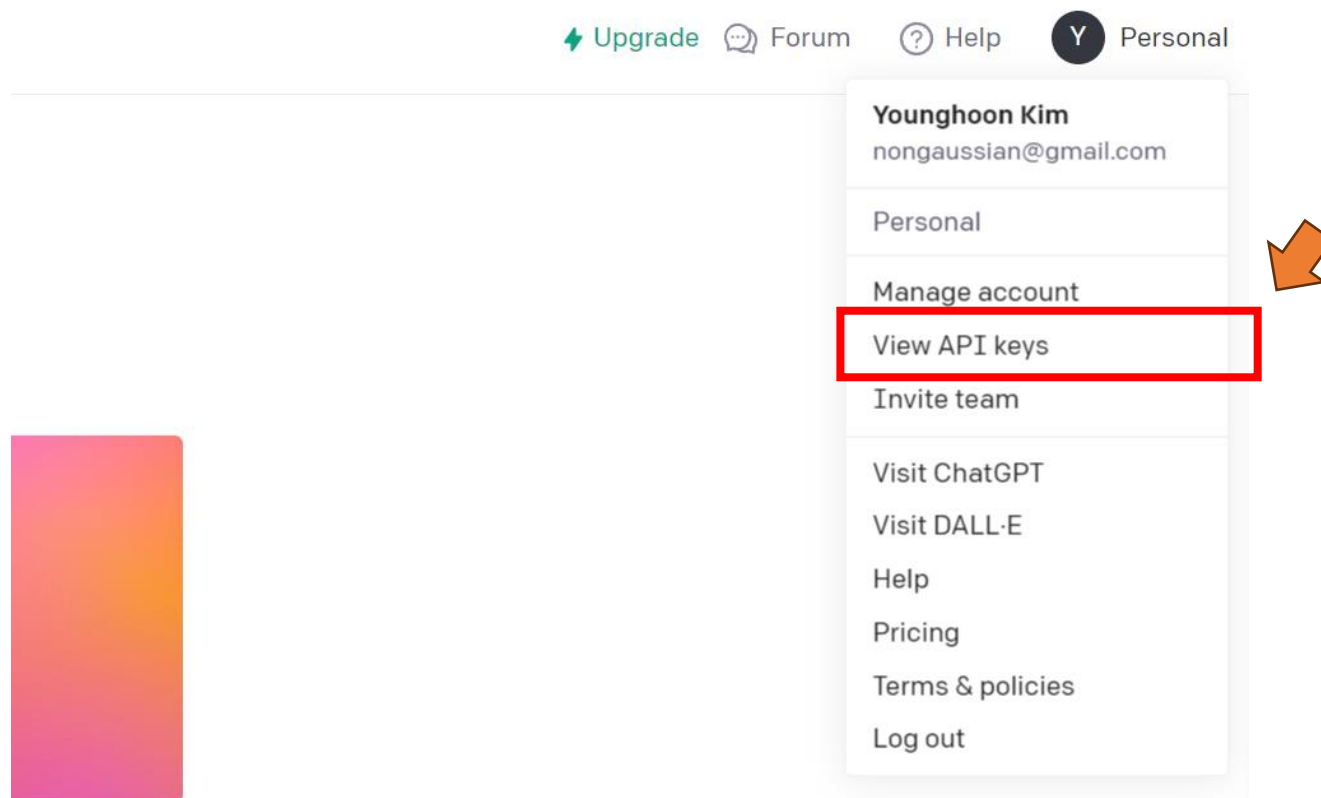
김영훈

한양대학교ERICA 인공지능학과



# API 키 받기


- Access "Personal > View API keys" from <https://platform.openai.com/>



# 크레딧 확인 및 충전

## Billing overview

### Pay as you go

 Credit balance ⓘ  
**\$5.00**



#### Auto recharge is off

When your credit balance reaches \$0, your API requests will stop working. Enable automatic recharge to automatically keep your credit balance topped up.

[Enable auto recharge](#)

Add to credit balance

Cancel plan

# API 키 생성

## API keys

Your secret API keys are listed below. Please keep them secret after you generate them.

Do not share your API key with others, or use it to protect the security of your account, OpenAI's policy has found has leaked publicly.

NAME	KEY
Secret key	sk-...A7KS

+ Create new secret key



### Create new secret key

Name Optional

chatgpt-in-your

### Create new secret key

Please save this secret key somewhere safe and accessible. For security reasons, **you won't be able to view it again** through your OpenAI account. If you lose this secret key, you'll need to generate a new one.

<YOUR API KEY>

Done

# 구글 Colab에서 ChatGPT와 통신!

- 1) openai 파이썬 패키지 설치

```
!pip install openai
```

Collecting openai

Downloading openai-0.28.1-py3-none-any.whl (76 kB)

----- 77.0/77.0 kB 2.4 MB/s eta 0:00:00

Requirement already satisfied: requests>=2.20 in /usr/local/lib/python3.10/dist-packages (from openai) (2.31.0)  
Requirement already satisfied: tqdm in /usr/local/lib/python3.10/dist-packages (from openai) (4.66.1)  
Requirement already satisfied: aiohttp in /usr/local/lib/python3.10/dist-packages (from openai) (3.8.5)  
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.10/dist-packages (from requests>=2.20->openai) (3.4)  
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-packages (from requests>=2.20->openai) (3.4)  
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.10/dist-packages (from requests>=2.20->openai) (2.0.7)  
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/dist-packages (from requests>=2.20->openai) (2024.2.2)  
Requirement already satisfied: attrs>=17.3.0 in /usr/local/lib/python3.10/dist-packages (from aiohttp->openai) (23.1.0)  
Requirement already satisfied: multidict<7.0,>=4.5 in /usr/local/lib/python3.10/dist-packages (from aiohttp->openai) (6.0.5)  
Requirement already satisfied: async-timeout<5.0,>=4.0.0a3 in /usr/local/lib/python3.10/dist-packages (from aiohttp->openai) (4.0.3)  
Requirement already satisfied: yarl<2.0,>=1.0 in /usr/local/lib/python3.10/dist-packages (from aiohttp->openai) (1.9.2)  
Requirement already satisfied: frozenlist>=1.1.1 in /usr/local/lib/python3.10/dist-packages (from aiohttp->openai) (1.4.0)

# 구글 Colab에서 ChatGPT와 통신!

- 2) 패키지 import

```
import openai
```

- 3) API 키 등록

```
openai.api_key = '<YOUR API KEY>'
```

앞서 생성한 API 키를 복붙

# 구글 Colab에서 ChatGPT와 통신!

- 4) 프롬프트 주고 답변 받는 함수 정의

```
def get_answer(prompt, model="gpt-3.5-turbo"):  
    messages = [ {"role": "user", "content": prompt} ]  
  
    response = openai.ChatCompletion.create(  
        model=model,  
        messages=messages,  
        temperature=0,  
    )  
  
    return response.choices[0].message["content"]
```

# 구글 Colab에서 ChatGPT와 통신!

- 5) 프롬프트 주고 답변 받아오기

```
get_answer("한양대학교로 여행을 써줘.")
```

한양대학교는  
지식과 열정이 넘치는 곳  
학문의 꽃이 피는 곳  
한양의 영광이 빛나는 곳

열정과 도전의 학교  
한양대학교는 자랑스러운 곳  
지혜와 창의력이 넘치는 곳  
한양의 영원한 기억이 살아있는 곳

한양대학교는  
미래를 여는 문이 있는 곳  
지성과 인성이 고루 갖추어진 곳  
한양의 꿈과 희망이 함께하는 곳



# 크레딧 확인

## Billing overview

### Pay as you go

Credit balance ⓘ

\$4.99



#### Auto recharge is off

When your credit balance reaches \$0, your API requests will stop working. Enable automatic recharge to automatically keep your credit balance topped up.

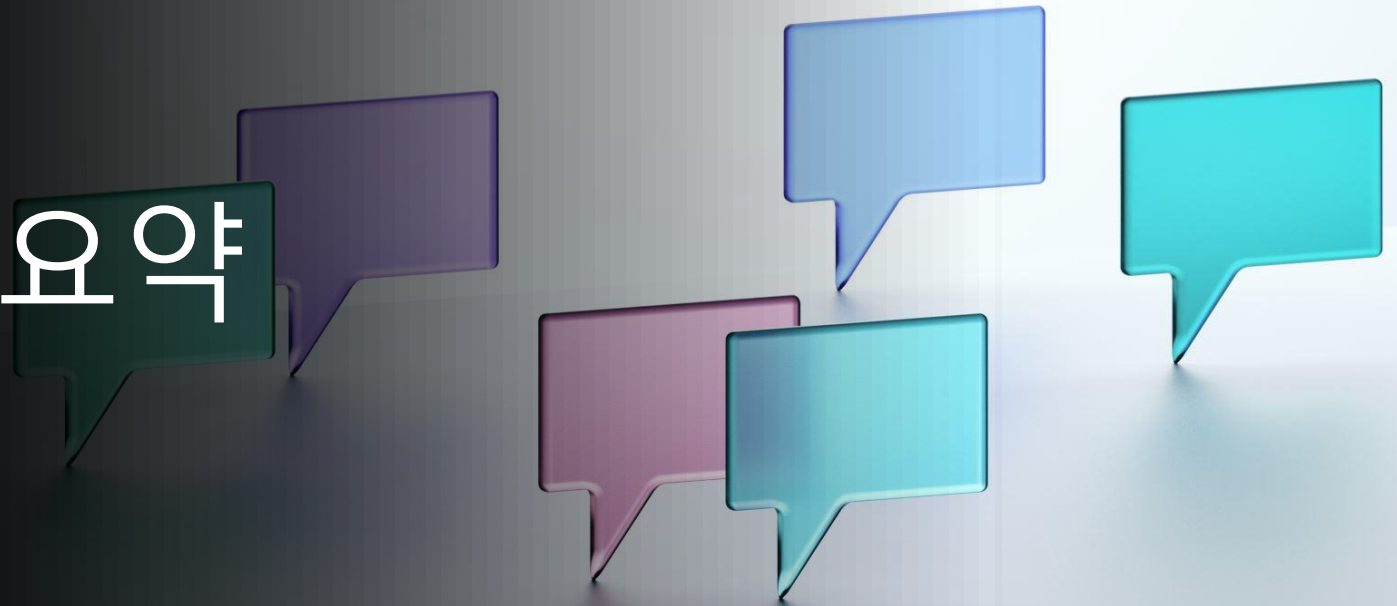
[Enable auto recharge](#)

Add to credit balance

Cancel plan

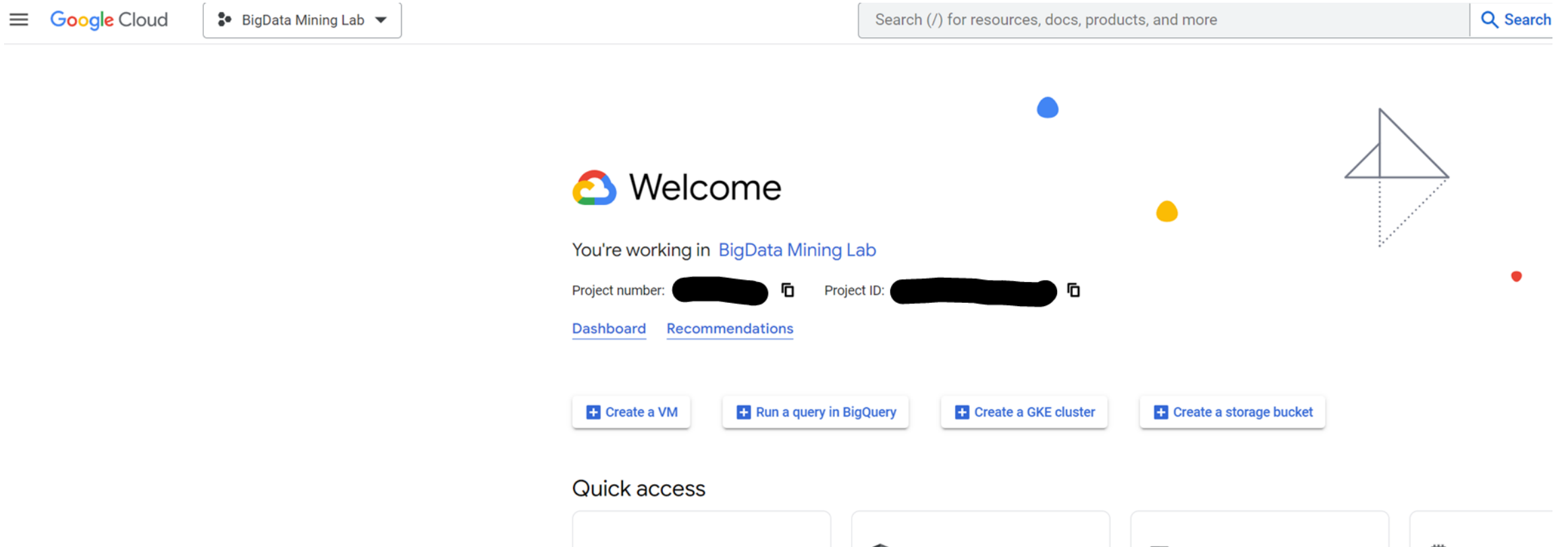


# 샘플APP: YouTube 댓글 요약



# Google API

- 로그인: <https://console.cloud.google.com/>
- 프로젝트 생성



The screenshot shows the Google Cloud console interface. At the top, there's a navigation bar with the Google Cloud logo, a dropdown menu for 'BigData Mining Lab', and a search bar. Below the navigation bar, the main content area features a 'Welcome' message with the Google Cloud logo. It states 'You're working in BigData Mining Lab' and displays the project number and ID, both of which are redacted with black boxes. There are links for 'Dashboard' and 'Recommendations'. Below this, there are four buttons: 'Create a VM', 'Run a query in BigQuery', 'Create a GKE cluster', and 'Create a storage bucket'. At the bottom, there's a 'Quick access' section with four empty placeholder boxes.

Google Cloud

BigData Mining Lab

Search (/) for resources, docs, products, and more

Search

Welcome

You're working in [BigData Mining Lab](#)

Project number: [REDACTED] Project ID: [REDACTED]

[Dashboard](#) [Recommendations](#)

[+ Create a VM](#) [+ Run a query in BigQuery](#) [+ Create a GKE cluster](#) [+ Create a storage bucket](#)



Quick access

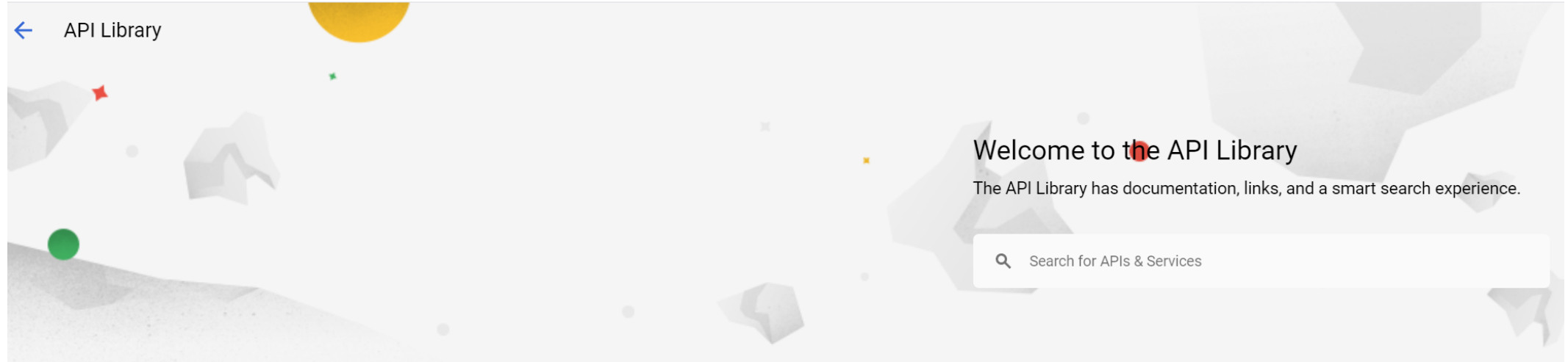
# API 키 생성


- 사용자인증정보 > +사용자인증정보만들기

The screenshot shows the 'API 및 서비스' (API and Services) management page. The left sidebar contains navigation items: '사용 설정된 API 및 서비스', '라이브러리', '사용자 인증 정보' (selected), 'OAuth 동의 화면', and '페이지 사용 동의'. The main content area is titled '사용자 인증 정보' and includes a red-bordered button '+ 사용자 인증 정보 만들기' with an orange arrow pointing to it. Below this are sections for 'API 키' (showing 1 key), 'OAuth 2.0 클라이언트 ID', and '서비스 계정'. A modal dialog titled 'API 키 생성 완료' (API Key Generation Complete) is overlaid on the right. It contains the text: '애플리케이션에서 이 키를 사용하려면 키를 `key=API_KEY` 매개변수로 전달하세요.' (To use this key in your application, pass it as the `key=API_KEY` parameter). It displays the generated API key as '<YOUR API KEY>' and includes a warning: '이 키는 제한되지 않습니다. 무단 사용을 방지하려면 API를 사용할 수 있는 위치와 대상을 제한하는 것이 좋습니다. 제한사항을 추가하려면 API 키를 수정하세요. 자세히 알아보기' (This key is not restricted. To prevent unauthorized use, it is recommended to restrict the locations and targets where the API can be used. To add restrictions, modify the API key. Learn more). The modal has a '닫기' (Close) button at the bottom right.

# YouTube Data API v3 사용 허용


 




 API Library

## Welcome to the API Library

The API Library has documentation, links, and a smart search experience.


 Search for APIs & Services


 **Filter** Type to filter


Maps


Visibility


Public (440)

 Maps SDK for Android


 Maps SDK for iOS

 Maps JavaScript API

 Places API

 Roads API

# YouTube Data API v3 사용 허용


 Google Cloud

BigData Mining Lab ▼

---

← Product details


---




## YouTube Data API v3

[Google](#)

The YouTube Data API v3 is an API that provides access to YouTube data, such as videos, playlists,...



**ENABLE**

[TRY THIS API](#) 

[OVERVIEW](#) [DOCUMENTATION](#) [SUPPORT](#) [RELATED PRODUCTS](#)

### Overview

The YouTube Data API v3 is an API that provides access to YouTube data, such as videos, playlists, and channels.

### Additional details

Type: [SaaS & APIs](#)

# 다양한 YouTube Data API에 관한 문서

Google Cloud BigData Mining Lab

Product details

## YouTube Data API v3

[Google](#)

The YouTube Data API v3 is an API that provides access to YouTube data, such as videos, playlists,...

[ENABLE](#) [TRY THIS API](#)

[OVERVIEW](#) [DOCUMENTATION](#) [SUPPORT](#) [RELATED PRODUCTS](#)

### Overview

The YouTube Data API v3 is an API that provides access to YouTube data, such as videos, playlists, and channels.

### Additional details

View: [SaaS & APIs](#)

YouTube > Data API

[홈](#) [가이드](#) [참조](#) [샘플](#) [지원](#)

필터

- 개요
- 활동
- 자막
- ChannelBanners
- 채널
- 채널 섹션
- 설명
- 댓글 대화목록
- 개요**
- list
- insert
- i18n언어
- i18n지역
- 구성원
- 멤버십 등급
- PlaylistItems
- 재생목록
- 검색
- 구독
- 썸네일
- 동영상 악용사례 신고 이유
- VideoCategories
- 동영상
- 워터마크

translated by Google 이 페이지는 Cloud Translation API를 통해

홈 > 제품 > YouTube > Data API > 참조

## CommentThreads

[commentThread](#) 리소스에는 최상위 댓글 및 댓글에 대한 답글을 반환합니다.

[commentThread](#) 리소스는 동영상 또는 채널에 대한 댓글을 반환합니다.

최상위 댓글과 답글은 실제로 [commentThread](#) 리소스 내의 모든 응답이 반드시 포함되는 것은 아니며 특정 댓글에 대한 답글이 없습니다.

### 방법

API는 [commentThreads](#) 리소스에 다음 메서드를 지원합니다.

#### list

API 요청 매개변수와 일치하는 댓글 스레드 목록을 반환합니다.

#### 삽입

새로운 최상위 수준 댓글을 작성합니다. 기존 댓글에 대한 답글을 작성할 수 있습니다.

# CommentThreads

```
DEVELOPER_KEY = '<Your API key>'

# -*- coding: utf-8 -*-

# Sample Python code for youtube.commentThreads.list
# See instructions for running these code samples locally:
# https://developers.google.com/explorer-help/code-samples#python

import os

import googleapiclient.discovery

# Disable OAuthlib's HTTPS verification when running locally.
# *DO NOT* leave this option enabled in production.
#os.environ["OAUTHLIB_INSECURE_TRANSPORT"] = "1"

api_service_name = "youtube"
api_version = "v3"
```



```
# https://developers.google.com/explorer-help/code-samples/python

import os

import googleapiclient.discovery

# Disable OAuthlib's HTTPS verification when running locally.
# *DO NOT* leave this option enabled in production.
#os.environ["OAUTHLIB_INSECURE_TRANSPORT"] = "1"

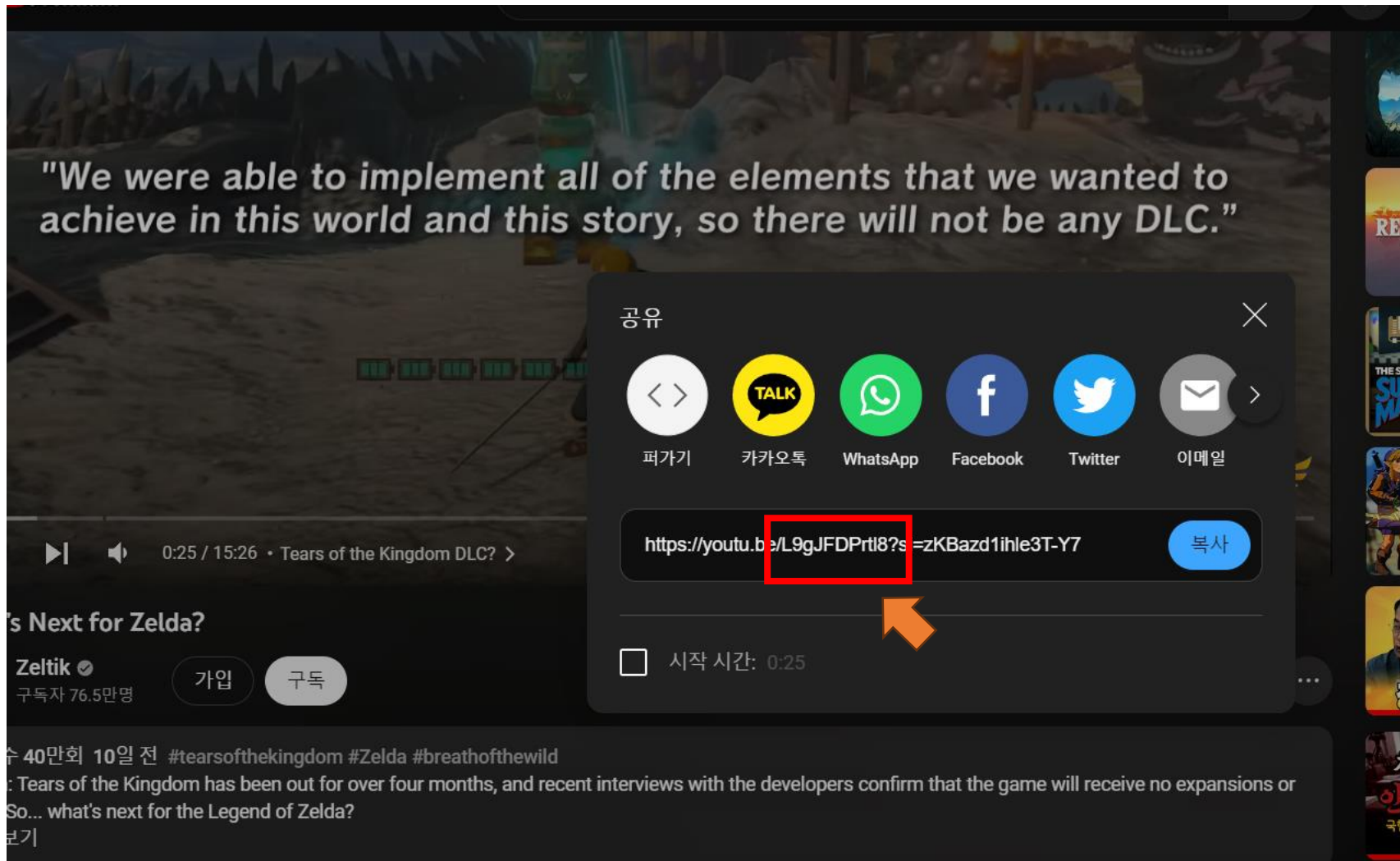
api_service_name = "youtube"
api_version = "v3"

youtube = googleapiclient.discovery.build(
    api_service_name, api_version, developerKey = DEVELOPER_KEY)

request = youtube.commentThreads().list(
    part="snippet",
    textFormat="plainText",
    videoId="L9gJFDPrtl8"
)
response = request.execute()
```



# YouTube Video ID



The image shows a YouTube video player interface. The video title is "Tears of the Kingdom DLC?". The video player shows a scene from the game with the text: "We were able to implement all of the elements that we wanted to achieve in this world and this story, so there will not be any DLC." A sharing overlay is visible in the center, showing various sharing options: 퍼가기, 카카오톡, WhatsApp, Facebook, Twitter, and 이메일. The video URL is displayed as <https://youtu.be/L9gJFDPrI8?s=zKBazd1ihle3T-Y7>, with the video ID **L9gJFDPrI8** highlighted by a red box and an orange arrow pointing to it. The video player also shows the video progress bar, the video duration (0:25 / 15:26), and the channel name (Zeltik) with 76.5만명 subscribers. The video description is partially visible at the bottom, mentioning "Tears of the Kingdom has been out for over four months, and recent interviews with the developers confirm that the game will receive no expansions or So... what's next for the Legend of Zelda?".

"We were able to implement all of the elements that we wanted to achieve in this world and this story, so there will not be any DLC."

공유

퍼가기 카카오톡 WhatsApp Facebook Twitter 이메일

<https://youtu.be/L9gJFDPrI8?s=zKBazd1ihle3T-Y7> 복사

시작 시간: 0:25

Zeltik  
구독자 76.5만명

가입 구독

수 40만회 10일 전 #tearsofthekingdom #Zelda #breathofthewild  
: Tears of the Kingdom has been out for over four months, and recent interviews with the developers confirm that the game will receive no expansions or  
So... what's next for the Legend of Zelda?  
보기

# 가져온 첫 20개 댓글

```
import json
print(json.dumps(response, indent=4))
```

```
{
  "kind": "youtube#commentThreadListResponse",
  "etag": "QSQsLY6VN13MIVj_j_t07nv1leY",
  "nextPageToken":
  "QURTSI9pMnIELW1xUGNtbW1Ka3U5SmlxWEIPM1hrdktUR3J2Mlo2TnhJWE5yTWJybFBLdzc0UVROalpoRGpuZGJkeXF3VzVzLUZjd1lxdw==",
  "pageInfo": {
    "totalResults": 19,
    "resultsPerPage": 20
  },
  "items": [
    {
      "kind": "youtube#commentThread",
      "etag": "tCf8xZa_Mm1EqI8Qmq_WqbkJqU",
      "id": "UgwLGg1Vq4TldQxz-cF4AaABAg",
      "snippet": {
        "channelId": "UCudx6plmpbs5WtWvsvu-EdQ",
        "videoId": "L9gJFDPrtl8",
        "topLevelComment": {
          "kind": "youtube#comment",
```



```
{
  "kind": "youtube#commentThreadListResponse",
  "etag": "QSQsLY6VN13MIVj_j_t07nv1leY",
  "nextPageToken":
"QURTSI9pMnIELW1xUGNtbW1Ka3U5SmlxWEIPM1hrdktUR3J2Mlo2TnhJWE5yTWJybFBLdzc0UVROalpoRGpuZGJkeXF3VzVzLUZjd1lxdw==",
  "pageInfo": {
    "totalResults": 19,
    "resultsPerPage": 20
  },
  "items": [
    {
      "kind": "youtube#commentThread",
      "etag": "tCf8xZa_Mm1EqI8Qmq_WqbkCJqU",
      "id": "UgwLGg1Vq4TldQxz-cF4AaABAg",
      "snippet": {
        "channelId": "UCudx6plmpbs5WtWvsu-EdQ",
        "videoId": "L9gJFDPrtl8",
        "topLevelComment": {
          "kind": "youtube#comment",
          "etag": "oSZqRDytQh7mkMPZwjZsee40asA",
          "id": "UgwLGg1Vq4TldQxz-cF4AaABAg",
          "snippet": {
            "channelId": "UCudx6plmpbs5WtWvsu-EdQ",
            "videoId": "L9gJFDPrtl8",
            "textDisplay": "We just got the new game, give it another 5 years to even start thinking about what's next, people can't enjoy the damn game and if you finished it we'll there's other games in the world",
            "textOriginal": "We just got the new game, give it another 5 years to even start thinking about what's next, people can't enjoy the damn game and if you finished it we'll there's other games in the world",
            "authorDisplayName": "Bryan Kelly",
            "authorProfileImageUrl": "https://yt3.ggpht.com/ytC/APkrFKb3Sd8vzXaqhBRvw38nj/kCqmpm_bI NVsv-kg=s48-c-k-c0x00ffffff-no-rj",
            "authorChannelUrl": "http://www.youtube.com/channel/UCqHxiMBBvWoWYcuXeF7xv8q",

```

# 다음 댓글 20개 가져오기

```
request = youtube.commentThreads().list(  
    part="snippet",  
    textFormat="plainText",  
    videoId="L9gJFDPrt18",  
    pageToken=response['nextPageToken']  
)  
response = request.execute()
```

# ChatGPT API를 이용해 댓글 요약

```
answer = get_answer("[summarize the comment thread of a YouTube video about  
the video game Zelda.] " + ''.join(comments))
```

The comment thread discusses various opinions and desires for the next Zelda game. Some users express their satisfaction with the current game and suggest waiting a few more years before expecting a new one. Others mention wanting a special treatment for the original A Link to the Past or a modern Ocarina of Time game with epic dungeons and a real story. Some users express a desire for a return to a regular dungeon crawler Zelda with a linear story and more populated cities and towns. There are also suggestions for a Link's Awakening remake, a game with a Sekiro or Elden Ring style, an AC Black Flag meets Zelda game, a 2D Zelda game, and a continuation of the current Zelda and Link's story in a new land. Some users mention specific features they would like to see, such as in-air combat, underwater exploration, a Hyrule Warriors game, a steampunk setting, and a cyberpunk-like setting. There are also requests for remakes of Twilight Princess and Wind Waker, as well as an HD remake of Minish Cap. Some users express disappointment with Breath of the Wild and Tears of the Kingdom, while others defend the games. Overall, there is a wide range of

# ChatGPT API를 이용해 번역

```
answer = get_answer("[Translate to Korean.] " + answer)
```

댓글 스레드에서는 다음 젤다 게임에 대한 다양한 의견과 바람이 나뉘어 이야기됩니다. 일부 사용자들은 현재 게임에 만족하며 새로운 게임을 기대하기 전에 몇 년을 더 기다리는 것을 제안합니다. 다른 사람들은 오리지널 A Link to the Past에 대한 특별한 대우나, 화려한 던전과 진짜 이야기가 있는 현대적인 Ocarina of Time 게임을 원한다고 언급합니다. 일부 사용자들은 일반적인 던전 크롤러 젤다로의 귀환, 선형적인 이야기와 인구 밀집된 도시와 마을을 더 원한다는 바람을 표현합니다. 또한 Link's Awakening 리메이크, Sekiro나 Elden Ring 스타일의 게임, AC Black Flag와 젤다가 만난 게임, 2D 젤다 게임, 그리고 새로운 땅에서 현재 젤다와 링크의 이야기를 이어가는 게임에 대한 제안도 있습니다. 일부 사용자들은 공중 전투, 수중 탐험, Hyrule Warriors 게임, 스팀펑크 설정, 사이버펑크와 유사한 설정과 같은 특정 기능들을 보고 싶다고 언급합니다. Twilight Princess와 Wind Waker의 리메이크, 그리고 Minish Cap의 HD 리메이크에 대한 요청도 있습니다. 일부 사용자들은 Breath of the Wild와 Tears of the Kingdom에 실망했지만, 다른 사람들은 이 게임들을 지지합니다. 전반적으로, 젤다 시리즈의 미래에 대한 다양한 의견과 바람이 있습니다.

# 야놀자의 사례



최저가보상 야놀자케어

## 삼척 노실풀펜션(수영장,개 별바베큐)

 [숙소 위치보기 >](#)


★ 4.9 (226) [숙소답변\(37\) >](#)

 ChatGPT로 최근 6개월 후기를 요... 

높은 평점 요약

낮은 평점 요약

넓고 깨끗하며, 엘리베이터가 있어 편리합니다. 수영장과 야외바베큐장도 마련되어 있고, 세탁기도 있어 물놀이 후 빨래 걱정이 없습니다. 사장님의 친절한 응대와 깔끔한 시설로 여행을 더욱 즐겁게 할 수 있습니다. 단점으로는 마트나 편의점이 주변에 적어 먹을 것을 사전에 준비해야 한다는 것입니다. 전체적으로 만족스러운 숙소이며, 추천합니다.

 현재 ChatGPT 기술 수준에서는 후기 요약이 정확하지 않거나 표현이 어색할 수 있습니다

[226개 후기 전체보기 >](#)