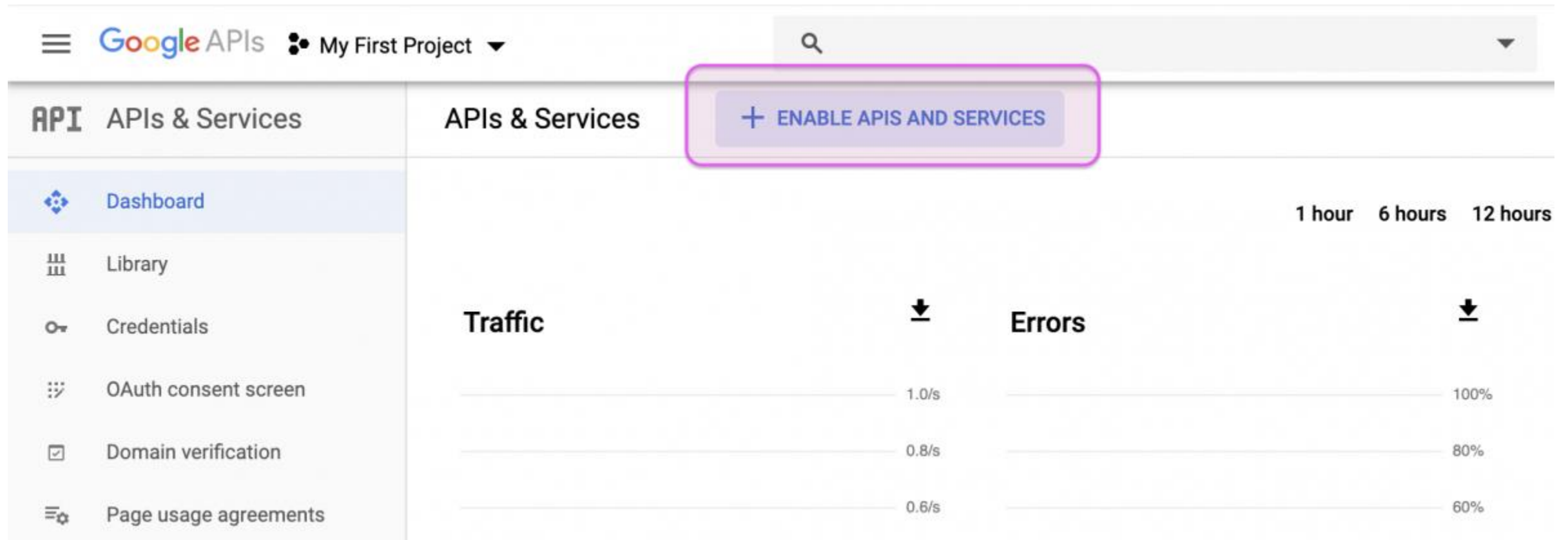


How to Download YouTube data

By John Eaton

Step 1. Enable API through your Google account

- <https://console.developers.google.com/apis/dashboard>

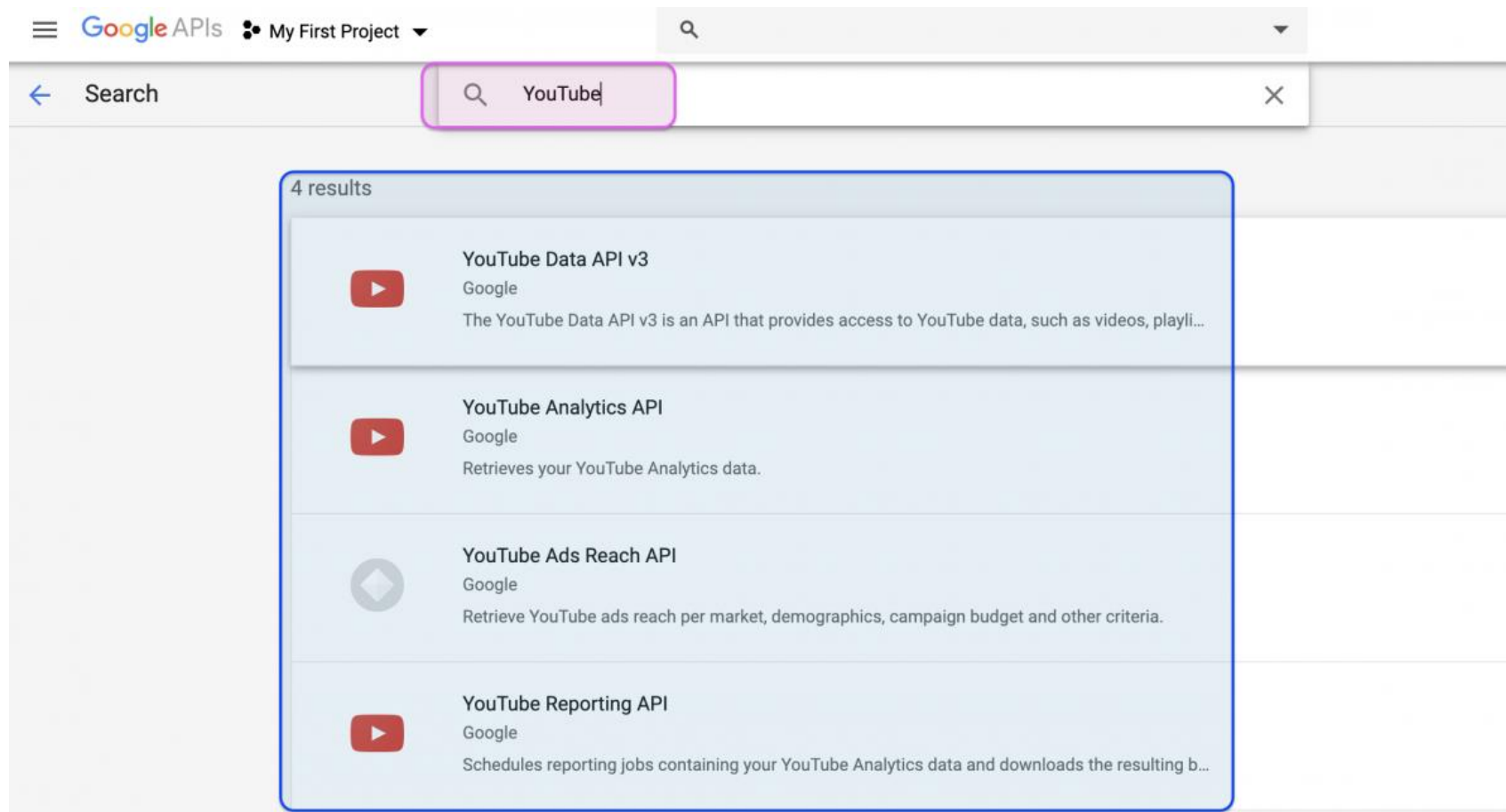


The screenshot shows the Google APIs & Services dashboard. At the top, there's a header with the Google APIs logo, the project name 'My First Project', and a search bar. Below the header, the 'APIs & Services' section is active, and a purple box highlights the '+ ENABLE APIS AND SERVICES' button. The left sidebar contains navigation links: Dashboard, Library, Credentials, OAuth consent screen, Domain verification, and Page usage agreements. The main content area displays two charts: 'Traffic' and 'Errors'. The 'Traffic' chart shows three data points: 1.0/s, 0.8/s, and 0.6/s. The 'Errors' chart shows three data points: 100%, 80%, and 60%.

Traffic		Errors	
Value	Unit	Value	Unit
1.0	/s	100%	
0.8	/s	80%	
0.6	/s	60%	



Step 1. Enable API through your Google account

- Click on the search bar and type in YouTube and you should see four options. Enable all of them.



Step 2. Create your credentials

- After enabling the API's, go back to the dashboard (first link)
 - Click on “credentials”

API

APIs & Services

Dashboard

Library

Credentials

OAuth consent screen

Domain verification

Page usage agreements


Credentials

Create credentials

Delete

Create credentials to access your enabled APIs. For more information, see the [authentication documentation](#).

API keys

<input type="checkbox"/> Name	Creation date	Restrictions	Key
<input type="checkbox"/> API key	Mar 5, 2019	5 APIs	AlzaSyDKdmr6Ahbx23IAkUAwkcBAG8VaEpVf8rk 

Step 2. Create your credentials

- Select OAuth client ID

Create credentials ▼

Delete

API key

Identifies your project using a simple API key to check quota and access

OAuth client ID

Requests user consent so your app can access the user's data

Service account key


Enables server-to-server, app-level authentication using robot accounts

Help me choose

Asks a few questions to help you decide which type of credential to use

Step 2. Create your credentials

- Select “Other” and type any name for your project

 Create OAuth client ID

For applications that use the OAuth 2.0 protocol to call Google APIs, you can use an OAuth 2.0 client ID to generate an access token. The token contains a unique identifier. See [Setting up OAuth 2.0](#) for more information.

Application type


☐ Web application

☐ Android [Learn more](#)

☐ Chrome App [Learn more](#)

☐ iOS [Learn more](#)

☒ Other

Name 

youtube-r-api-app

Create

Cancel

Step 2. Create your credentials

- You now have a client ID and a client “password”
 - You will need these in R

OAuth client

The client ID and secret can always be accessed from Credentials in APIs & Services

i OAuth is limited to 100 [sensitive scope logins](#) until the [OAuth consent screen](#) is published. This may require a verification process that can take several days.

Here is your client ID

[Redacted client ID] 

Here is your client secret

[Redacted client secret] 

Click here!

To copy

OK

Step 3. Authenticate your application

- The following steps you must do in Rstudio

1. Install and load the “tuber” package

This is the package that allows you to download the data from YouTube

R Code:

```
install.packages("tuber")
```

```
library(tuber) # youtube API
```

#The below codes can help with cleaning/manipulating the data

```
library(magrittr) # Pipes %>%, %T>% and equals(), extract().
```

```
library(tidyverse) # all tidyverse packages
```

```
library(purrr) # package for iterating/extracting data
```


Step 3. Authenticate your application

- With the tuber package loaded:

2. Save your client ID and a client “password” as 2 objects:

```
client_id <- "XXXXXXXXXX"
```

```
client_secret <- "XXXXXXXXXX"
```

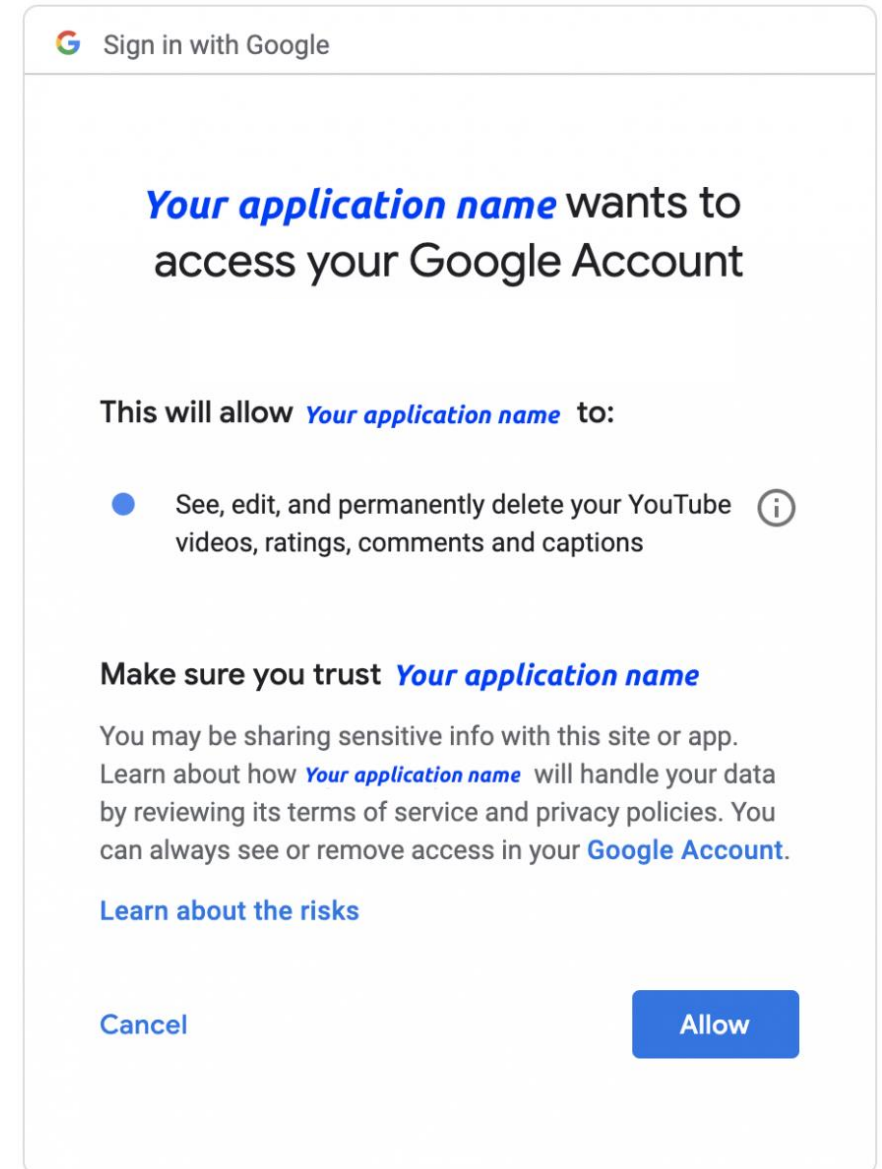
3. Now, you can authenticate your application with tuber

```
yt_oauth(app_id = client_id,  
         app_secret = client_secret,  
         token = "")
```

Step 3. Authenticate your application

4. If you did everything correctly, your browser will open and ask you to allow the application to access your google account. Click Allow

Now you can go back to R and start downloading data!



Step 4. Getting some data

Some tuber commands for downloading data:

To get general YouTube Channel statistics:

```
get_channel_stats(channel_id="")
```

This will give you the total number of views, subscribers, & number of videos for the YouTube channel

The IDs are typically the last sequence of the URL:

For example, if the url is:

<https://www.youtube.com/channel/UCjmJDM5pRKbUIVIzDYYWb6g>

The Channel ID is **UCjmJDM5pRKbUIVIzDYYWb6g**.

Step 4. Getting some data

Create an object storing the data for the channel:

```
Yt_channel <-  
get_channel_stats(channel_id='UCjmJDM5pRKbUIVlzDYYWb6g')
```

To clarify, this gives you data on the YouTube channel as a whole, it is not broken down individually by all of their videos.

*Could get mass statistics on all of the channel's videos, but that is time consuming, and takes up a lot of your quota (imposed by Google)

Step 4. Getting some data

Looking at an individual YouTube video:

The Batman 2021 trailer ~downloaded on 9/3

- url is https://www.youtube.com/watch?v=NLOp_6uPccQ

So, the video ID is NLOp_6uPccQ

#get all comments

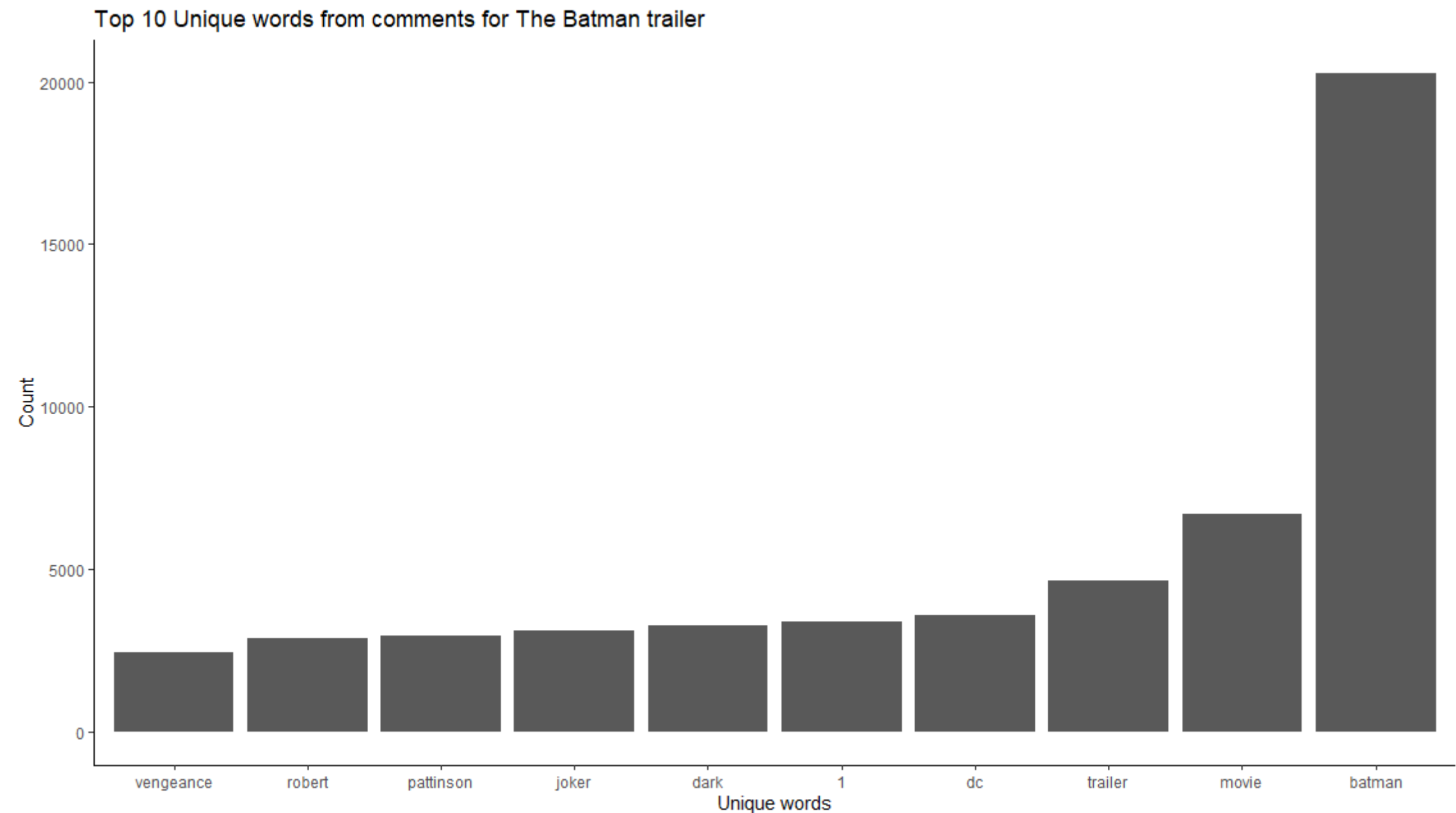
```
bat_comments <- get_all_comments(video_id="NLOp_6uPccQ")
```

	videoid	textDisplay	textOriginal	authorDisplayName
1	NLOp_6uPccQ	DC is like - dark, dark, dark, little light, little more light, little ...	DC is like - dark, dark, dark, little light, little more light, little ...	Owl of Policy
2	NLOp_6uPccQ	"Robert, demonstrate on this man how much you des...	"Robert, demonstrate on this man how much you despise th...	Male V
3	NLOp_6uPccQ	Seriously...this gives me chills...	Seriously...this gives me chills...	Panborlang Marbaniang
4	NLOp_6uPccQ	words cannot expresed how much im hype for this movie, b...	words cannot expresed how much im hype for this movie, b...	Ice Wallowcome
5	NLOp_6uPccQ	I LOVE THE JOKER SO I LOVE BATMAN MOVIE YOU LI...	I LOVE THE JOKER SO I LOVE BATMAN MOVIE YOU LIKE IT ...	HOLLYWOOD MOVIE EDITZ
6	NLOp_6uPccQ	18.128 people got beat up by BATTinson	18.128 people got beat up by BATTinson	Ranger Danger Oranger
7	NLOp_6uPccQ	<a href="https://www.youtube.com/watch?v=NLOp_6uPccQ"	1:46 1:57	BHARATH PALEKER
8	NLOp_6uPccQ	i hate how yall think this is to edgy or robert pattison is crin...	i hate how yall think this is to edgy or robert pattison is crin...	GSM_MONCLER Harvey
9	NLOp_6uPccQ	Looks promising but they need to tune in the voice by lowe...	Looks promising but they need to tune in the voice by lowe...	King Slayer
10	NLOp_6uPccQ	based on the way his suit looks i think robert is playing his r...	based on the way his suit looks i think robert is playing his r...	Youtube Zelks
11	NLOp_6uPccQ	What about Batfleck in massacre scene?!	What about Batfleck in massacre scene?!	Grox Prime Music
12	NLOp_6uPccQ	Just here to remind you that I am just some dog with a mus...	Just here to remind you that I am just some dog with a mus...	just some dog with a mustache
13	NLOp_6uPccQ	I'm ready for Battinson	I'm ready for Battinson	gagalover2k10
14	NLOp_6uPccQ	❤❤	❤❤	JimSepticEyes
15	NLOp_6uPccQ	I much rather this serial killer version of the Riddler than Jim...	I much rather this serial killer version of the Riddler than Jim...	Alexander Hall
16	NLOp_6uPccQ	Batman - darkman	Batman - darkman	onlinejob trendz
17	NLOp_6uPccQ	Goosebumps	Goosebumps	Ashwani kumar
18	NLOp_6uPccQ	from vampire to bat man LOL thank you Robert patts	from vampire to bat man LOL thank you Robert patts	Jarucium
19	NLOp_6uPccQ	I honestly take back everything i ever said bad about the DC...	I honestly take back everything i ever said bad about the DC...	Jaidev Adithya
20	NLOp_6uPccQ	riddler gonna fix gotham with flex tape	riddler gonna fix gotham with flex tape	Sahil Seshadri
21	NLOp_6uPccQ	This might not be The Riddler at all..... It could be Hush.	This might not be The Riddler at all..... It could be Hush.	Johnny Lira
22	NLOp_6uPccQ	Why are we all still here ?	Why are we all still here ?	Siavash Sharifi
23	NLOp_6uPccQ	Batman Does Not Kill	Batman Does Not Kill	Jorge Axel Correa
24	NLOp_6uPccQ	Why is Riddler looking like Hush I dig it tho. Also, Penguin I...	Why is Riddler looking like Hush I dig it tho. Also, Penguin I...	Estefano Reano
25	NLOp_6uPccQ	Oke	Oke	Cliok Baa
26	NLOp_6uPccQ	Hi my name is Angel and I'm addicted to watching this...	Hi my name is Angel and I'm addicted to watching this trailer	GWA66
27	NLOp_6uPccQ	Where is Johnny Depp Joker	Where is Johnny Depp Joker	Clapped By Azide
28	NLOp_6uPccQ	After reading an article, I came to know the man at <a href=...	After reading an article, I came to know the man at 1:17 is C...	Apoorv gaurav singh
29	NLOp_6uPccQ	I wish Ben Affleck was still The Batman.	I wish Ben Affleck was still The Batman.	Apoorv gaurav singh

- Can see # of likes comment got
- Date comment published

	authorChannelId.value	canRate	viewerRating	likeCount	publishedAt	updatedAt	id
PR5P2ByQ...	UC8dDA9zq9jvPR5P2ByQk03g	TRUE	none	0	2020-09-03T15:31:21Z	2020-09-03T15:31:21Z	UgxsKGxyQjI4bcZm6214AaABAg
ivqjAi5Me...	UCh0fm-fu2WhvqjAi5MeTsmg	TRUE	none	0	2020-09-03T15:26:24Z	2020-09-03T15:27:32Z	UgwUUhithJWHlxGdOdx4AaABAg
3hZYPkQU...	UCGjVCuNiSiInKihZYPkQUFaA	TRUE	none	0	2020-09-03T15:23:44Z	2020-09-03T15:23:44Z	Ugz7bZVpKT0GwDXjFox4AaABAg
lwz2-6C5x...	UCI7I4N-z2qj91wz2-6C5xag	TRUE	none	0	2020-09-03T15:15:06Z	2020-09-03T15:15:06Z	UgyPRBvs8XnY7oyLxxF4AaABAg
oQug8Fc...	UCy8ppfwqTr4pQug8FcWj-Og	TRUE	none	0	2020-09-03T15:15:04Z	2020-09-03T15:15:04Z	UgwfriccF2YenAYW8Wh4AaABAg
K6PVtiZ0H...	UCveyeRNx8IRX6PVtiZ0H6GA	TRUE	none	1	2020-09-03T15:06:09Z	2020-09-03T15:06:09Z	UgyaXMRBQMTgXkFocEN4AaABAg
3s77fqwx...	UCvsYu_R_D949s77fqwxw0wg	TRUE	none	2	2020-09-03T15:01:13Z	2020-09-03T15:01:40Z	Ugyz1W6gSGvoJlIhfxN4AaABAg
UCBYoiW7...	UCcRmsP0Q0eUCBYoiW7FIJCA	TRUE	none	2	2020-09-03T15:00:55Z	2020-09-03T15:00:55Z	Ugx6vb9hPl1wG-jik094AaABAg
4kDHAYk8l...	UCRJZ4FCN1eAkDHAYk8INNDA	TRUE	none	2	2020-09-03T14:50:11Z	2020-09-03T14:50:11Z	UgwpSTns2AZDc9kenBF4AaABAg
pMipk4RY...	UCXN6PAnp1upMipk4RYw3QbA	TRUE	none	2	2020-09-03T14:45:49Z	2020-09-03T14:46:21Z	Ugy1HxKnjbNpXG9fB2R4AaABAg
3RxcJf7wE...	UCeTpUCjp42w3RxcJf7wE0Tg	TRUE	none	2	2020-09-03T14:36:55Z	2020-09-03T14:36:55Z	Ugz5FRjZu_bbAbUfUKZ4AaABAg
aYkfLK4o...	UC7N1_yjkmC3aYkfLK4oMo3A	TRUE	none	1	2020-09-03T14:35:17Z	2020-09-03T14:35:17Z	UgzWScgadkJIIF_FYIh4AaABAg
/3hd3PYKv...	UCWJI8drkfGby3hd3PYKv02Q	TRUE	none	1	2020-09-03T14:33:30Z	2020-09-03T14:33:30Z	UgyMAa5xQNIzZsZCUWwx4AaABAg
:Y_hCM_W...	UCHVuTTXHNey_hCM_Wz9xO6g	TRUE	none	0	2020-09-03T14:23:48Z	2020-09-03T14:23:48Z	Ugx9jdl-CGQG5RS91gV4AaABAg
3-4EB1XTA...	UC28M5fCen8D-4EB1XTAawug	TRUE	none	5	2020-09-03T14:14:12Z	2020-09-03T14:14:12Z	Ugw9M-aOd4JIHZD4kP54AaABAg
ku4zYRzU...	UC6T6cnF5F5eKu4zYRzU78Rg	TRUE	none	0	2020-09-03T14:05:20Z	2020-09-03T14:05:20Z	UgyG8qAgGorNgxcpxYh4AaABAg
iZCeY8VA...	UCaSyPI7aL74GZCeY8VAqgHw	TRUE	none	1	2020-09-03T14:02:49Z	2020-09-03T14:02:49Z	Ugzo3D02RmGhV8G7wrR4AaABAg
:BiO46LGO...	UCiz2NV9W-eEBiO46LGOk53w	TRUE	none	0	2020-09-03T14:01:51Z	2020-09-03T14:01:51Z	UgzprfcPAlu0Q7XOc7J4AaABAg
:BuL27ut-...	UCBQR1tk1O_eBuL27ut-p7gA	TRUE	none	0	2020-09-03T14:01:16Z	2020-09-03T14:01:16Z	UgxhHqj19ILL27FpTCVV4AaABAg
3KdN2aqA...	UCZrPecUHrcL9KdN2aqAX41g	TRUE	none	0	2020-09-03T13:43:30Z	2020-09-03T13:43:30Z	UgwzH1EpU5hFuCFaYyl4AaABAg
ie_dzLZP7...	UCzMb7Tt5R2ne_dzLZP7819Q	TRUE	none	0	2020-09-03T13:40:13Z	2020-09-03T13:40:13Z	UgwjiUHBW50W6P8sQN4AaABAg
KnOPTYE...	UCNsO0AGD-5KnOPTYEmwrnxA	TRUE	none	0	2020-09-03T13:39:14Z	2020-09-03T13:39:14Z	Ugzd6Yp4pzh-7CNC7Gt4AaABAg
uwNirDAb...	UCkyLYn7mk_j_uwNirDAbh9A	TRUE	none	0	2020-09-03T13:35:40Z	2020-09-03T13:35:40Z	UgyofDPqKpkNzluKGUd4AaABAg
4fLXAw8Q...	UC4UBm1lgo4AfLXAw8Q1UJ1Q	TRUE	none	0	2020-09-03T13:30:40Z	2020-09-03T13:30:40Z	UgzgwiwVY_c_Q_Zf5AF4AaABAg
HvSx206L...	UCml7cMIGHwHvSx206LpVvxQ	TRUE	none	0	2020-09-03T13:27:32Z	2020-09-03T13:27:32Z	Ugyf5FecEilE9sRIJtN4AaABAg
3KLfq4IBD...	UCE8_BA45-dx8KLfq4IBDYrg	TRUE	none	1	2020-09-03T13:26:14Z	2020-09-03T13:26:14Z	Ugzq139RrxAURNKwnx4AaABAg
i3TWD_xo...	UCde6JbHMMVYi3TWD_xocvg3g	TRUE	none	1	2020-09-03T13:21:22Z	2020-09-03T13:21:22Z	Ugzcl-3OIgovm-VKW1d4AaABAg
teesXDKO...	UCPX54kJg8b9eesXDKO1Ezw	TRUE	none	0	2020-09-03T13:20:30Z	2020-09-03T13:20:30Z	Ugxi21rbnKUQ19FfULV4AaABAg
teesXDKO...	UCPX54kJg8b9eesXDKO1Ezw	TRUE	none	0	2020-09-03T13:18:21Z	2020-09-03T13:18:21Z	UgxbWx-UZcLcTR85FSp4AaABAg

Data Visualization



Wrapping up...

- Lots of cool things to do with YouTube data
- Easy to obtain once you get the hang of it; cleaning the data and getting for analysis is the hard part
- Online tutorials are your FRIEND!