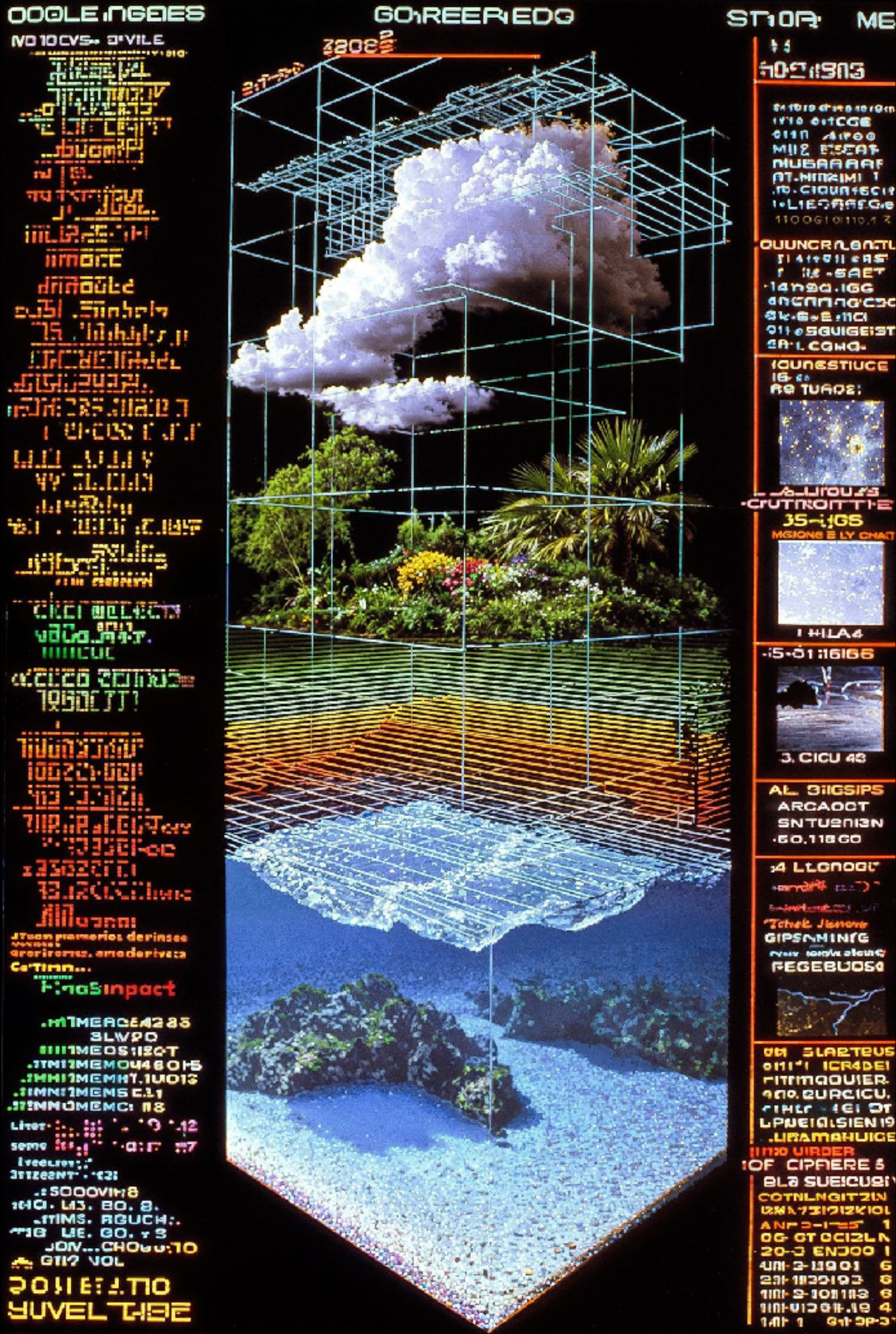
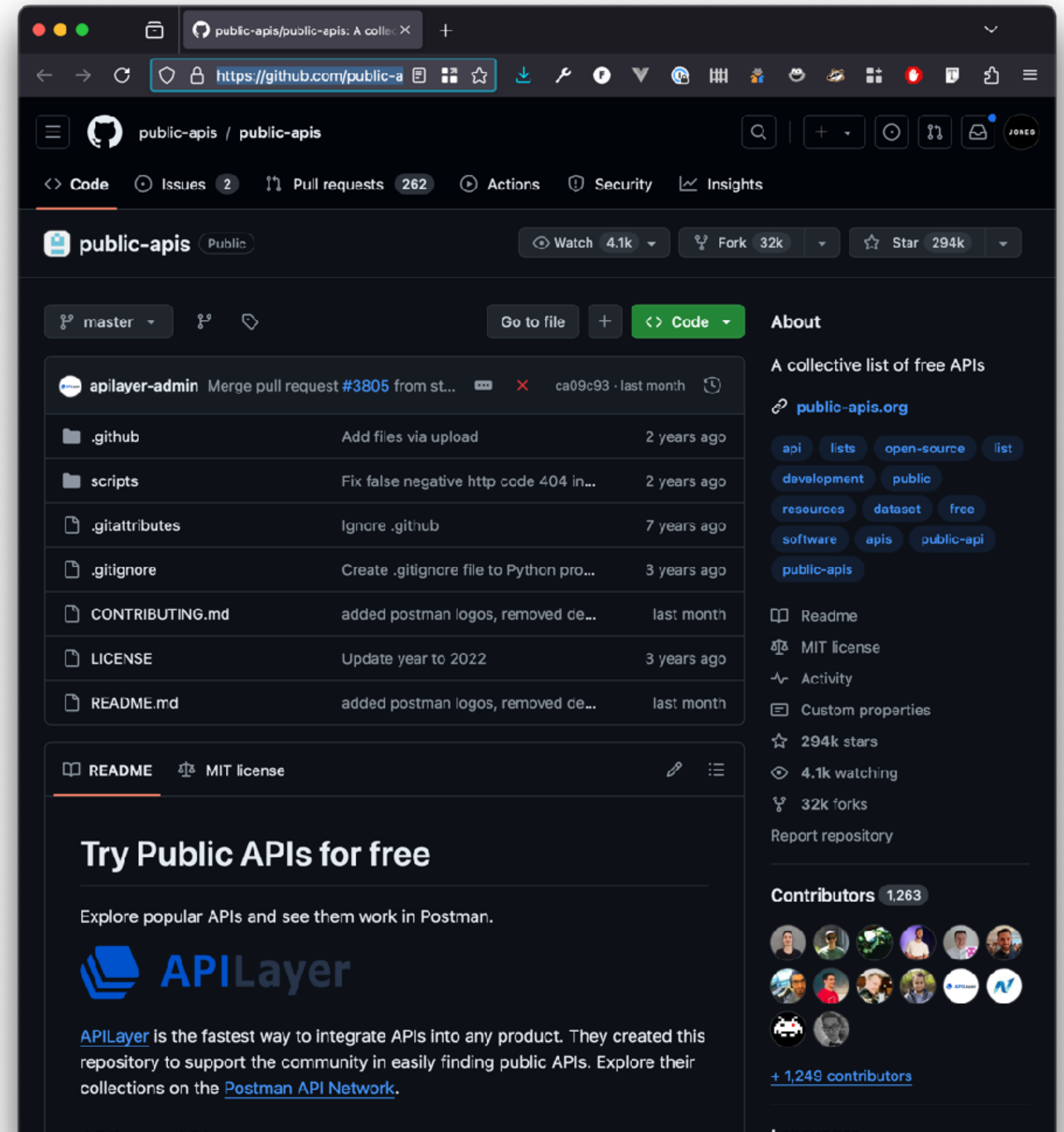


API – APPLICATION PROGRAMMING INTERFACE



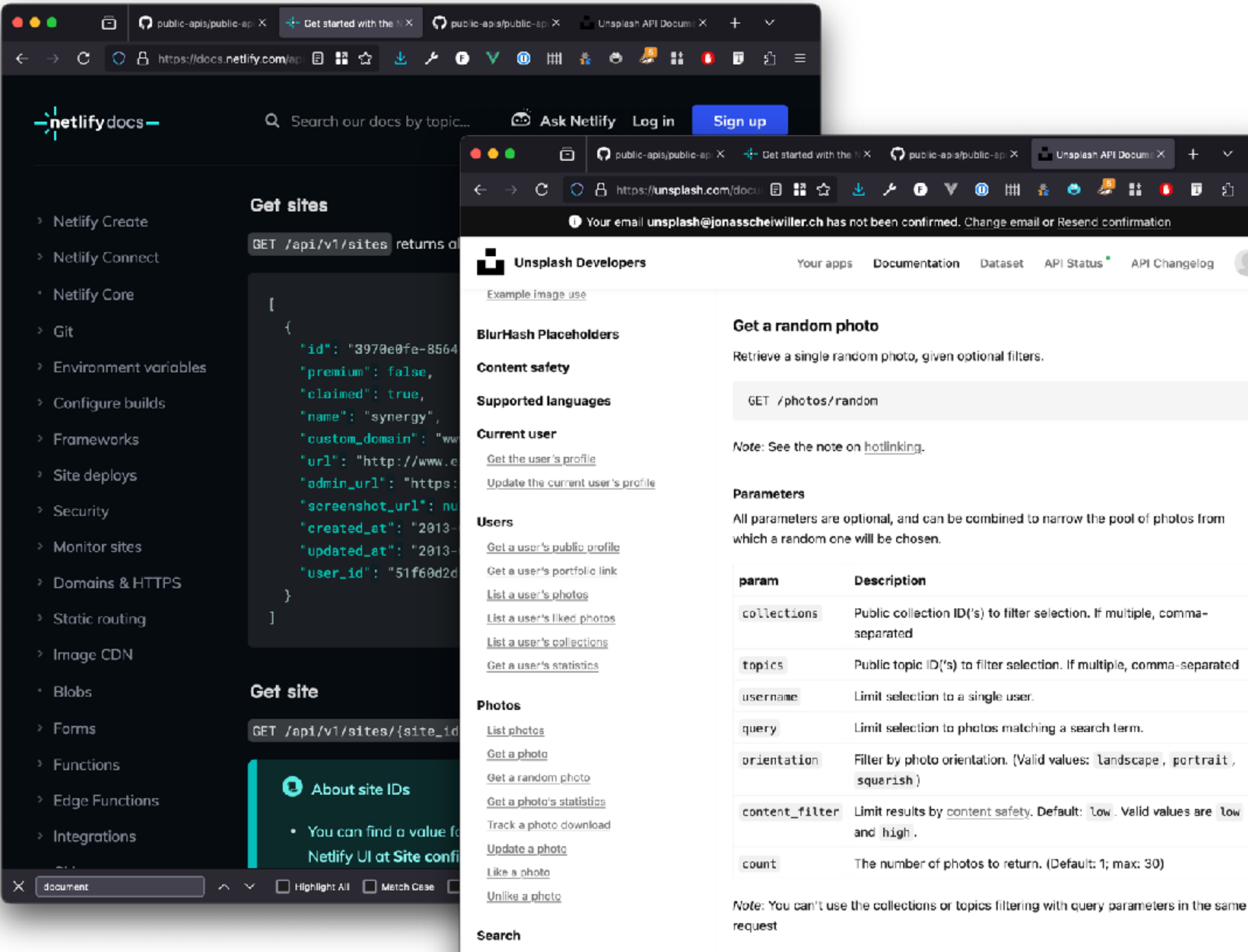
DATA, DATA, DATA

- API (Application Programming Interface) for communication between two applications
- e. g. For sharing data
 - Pulling data from public APIs
 - Using headless CMSs (Content Management Systems) (→ <https://www.netlify.com/blog/complete-guide-to-headless-cms/>)
- More customisable way of embedding data from elsewhere



DATA FETCHING → USING APIS

- Normally «protected» by authentication
- Most of the times the work quite similarly and have good documentation



ars

TECHNICA

AI

BIZ & IT

CARS

CULTURE

GAMING

HEALTH

POLICY

SCIENCE

SECURITY

SPACE

TECH

FORUM

SUBSCRIBE

SIGN IN

"THIS IS INSANE"

World's largest shadow library made a 300TB copy of Spotify's most streamed songs

Spotify is reportedly investigating how much music Anna's Archive scraped.

ASHLEY BELANGER

22 DEC 2025 20:34

148

Credit: picture alliance / Contributor | picture alliance

Aa

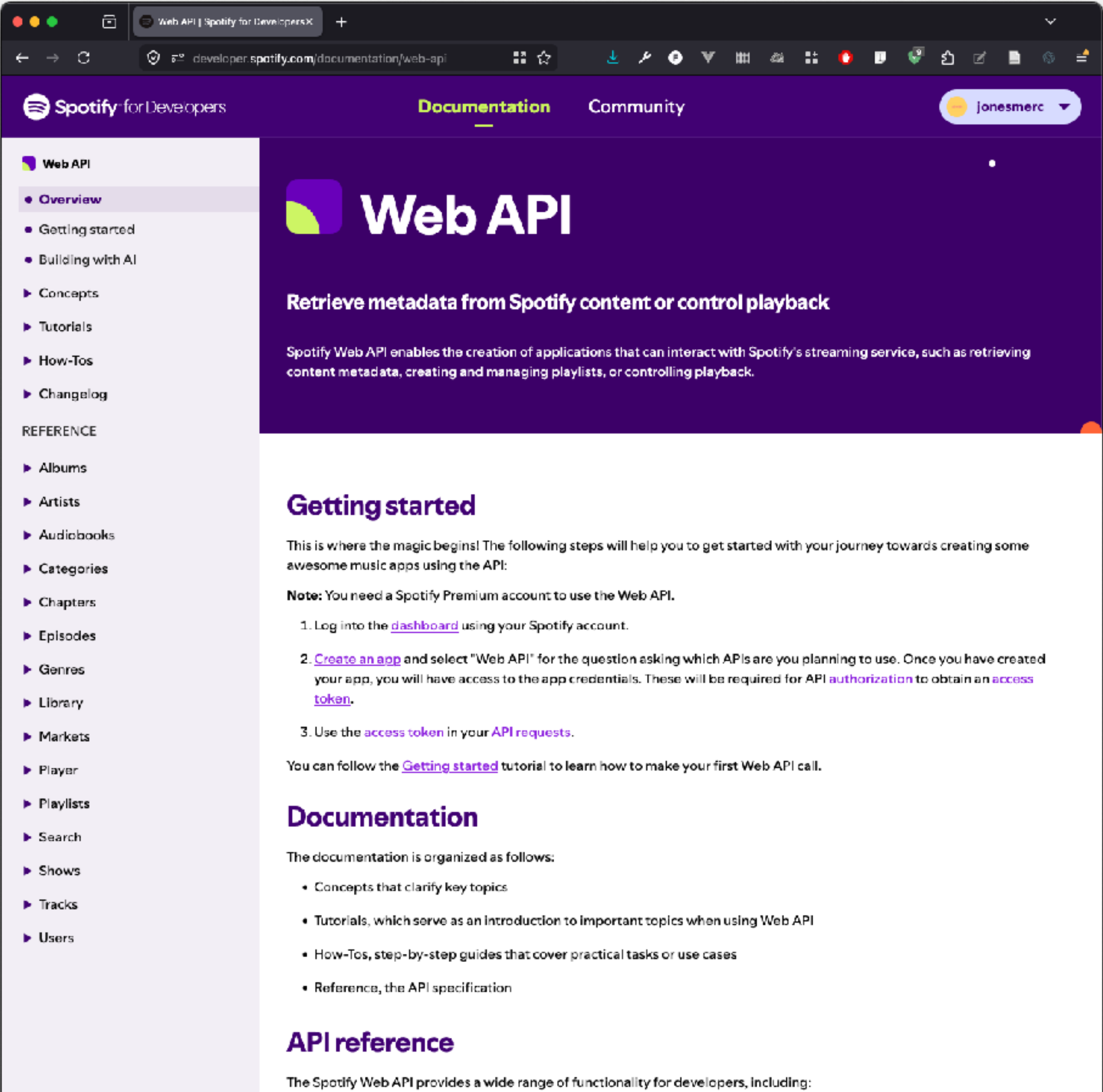
The world's largest shadow library—which is increasingly funded by AI developers—shocked the Internet this weekend by announcing it had “backed up Spotify” and started distributing 300 terabytes of metadata and music files in bulk torrents.

According to Anna's Archive, the data grab represents more than 99 percent of listens on Spotify, making it “the largest publicly available music metadata database with 256 million tracks.” It's also “the world's first ‘preservation archive’ for music which is fully open,” with 86 million music files, the archive boasted.

The music files supposedly represent about 37 percent of songs available on Spotify as of July 2025. The scraped files were prioritized by popularity, with Anna's Archive weeding out many songs that are never streamed or are of poor quality, such as AI-generated songs.

https://arstechnica.com/tech-policy/2025/12/worlds-largest-shadow-library-brags-it-scraped-300tb-of-spotify-music-metadata/

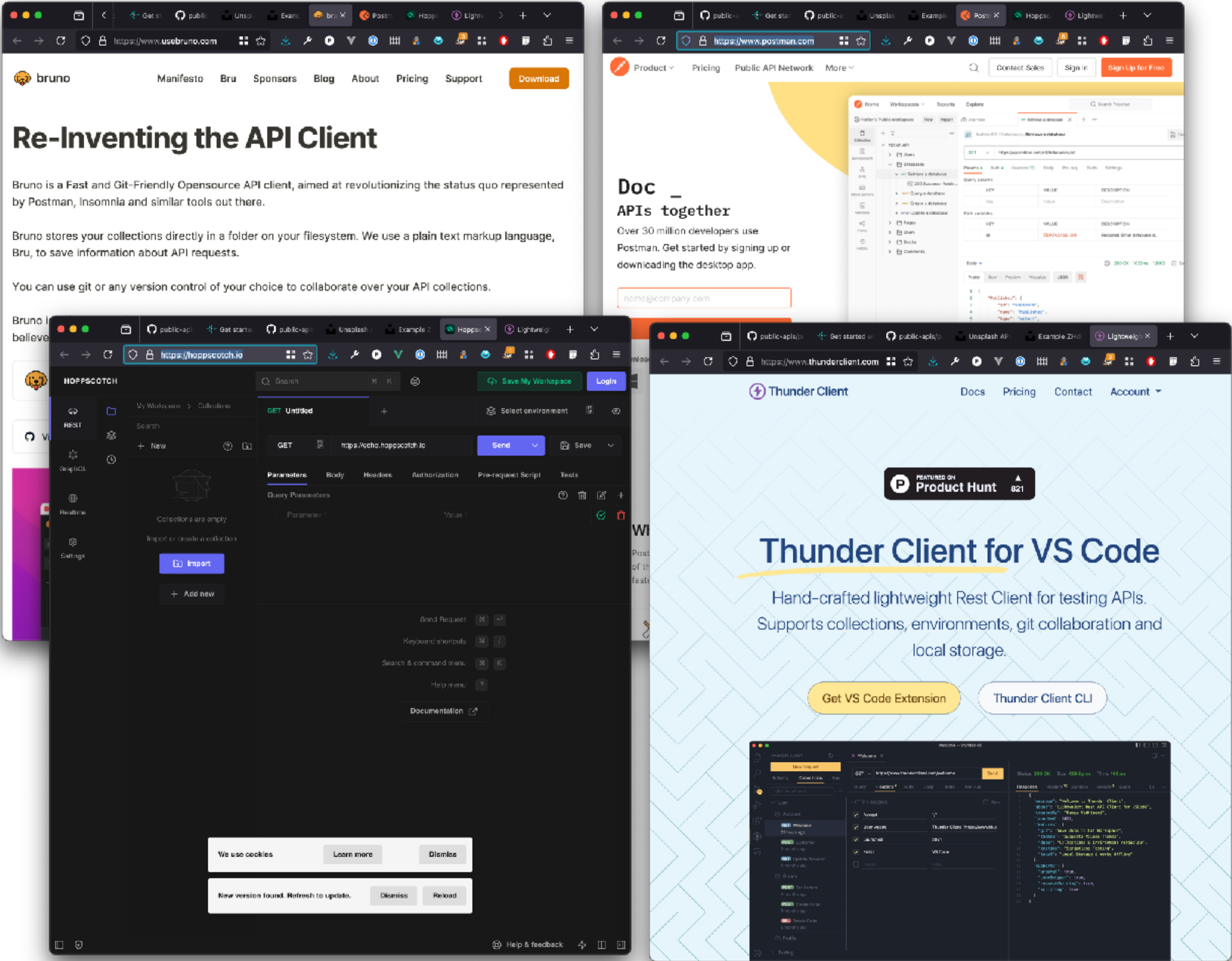
SPOTIFY WEB API



DATA FETCHING → API CLIENT

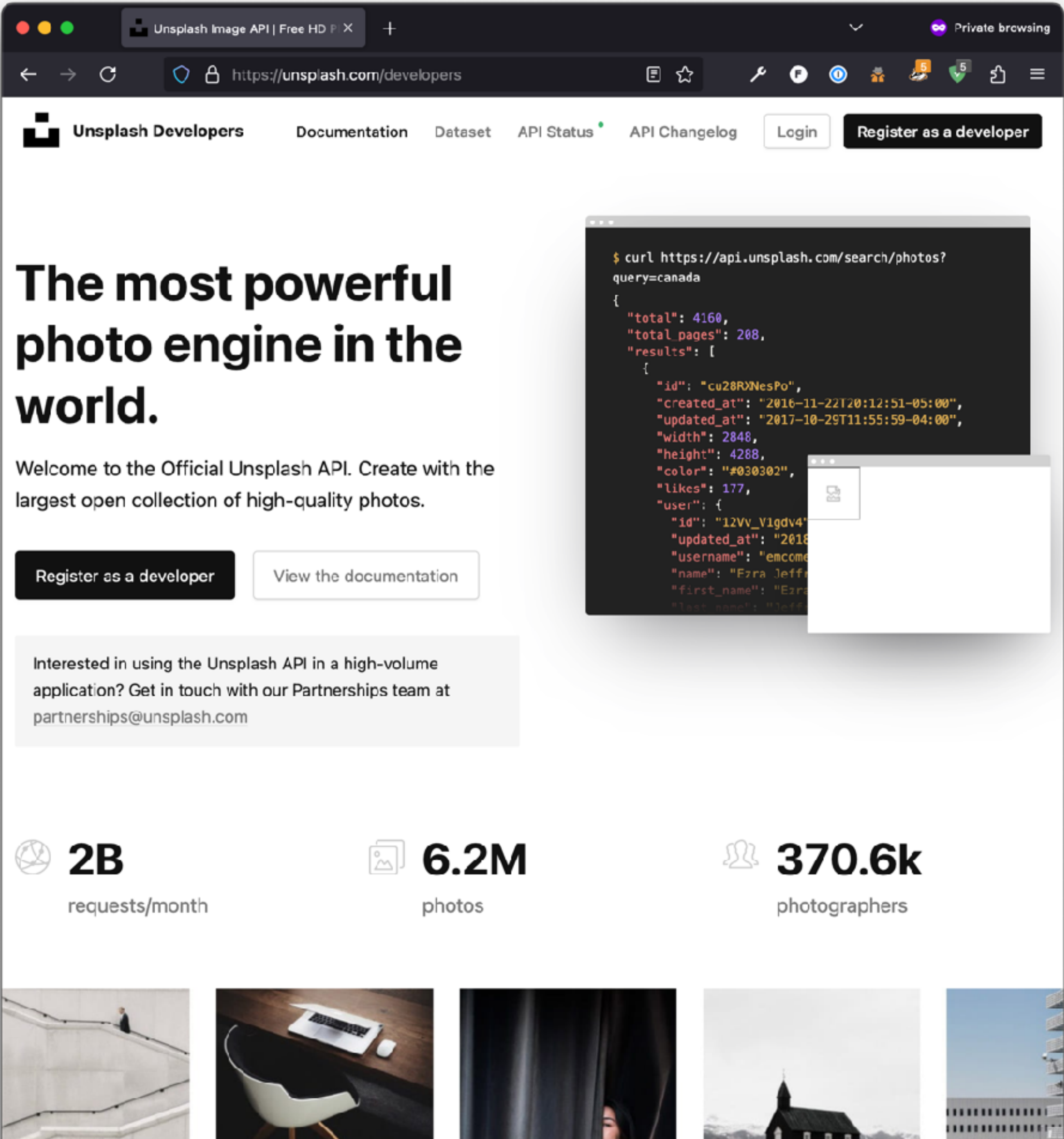
- You can fetch data with JavaScript (and in the browser), but for testing sometimes it's easier to use an API client
- Bruno 🐶
- Postman 👍
- Insomnia 🙄

<https://www.usebruno.com/>
<https://www.postman.com/>
<https://hoppscotch.io/>
<https://www.thunderclient.com/>



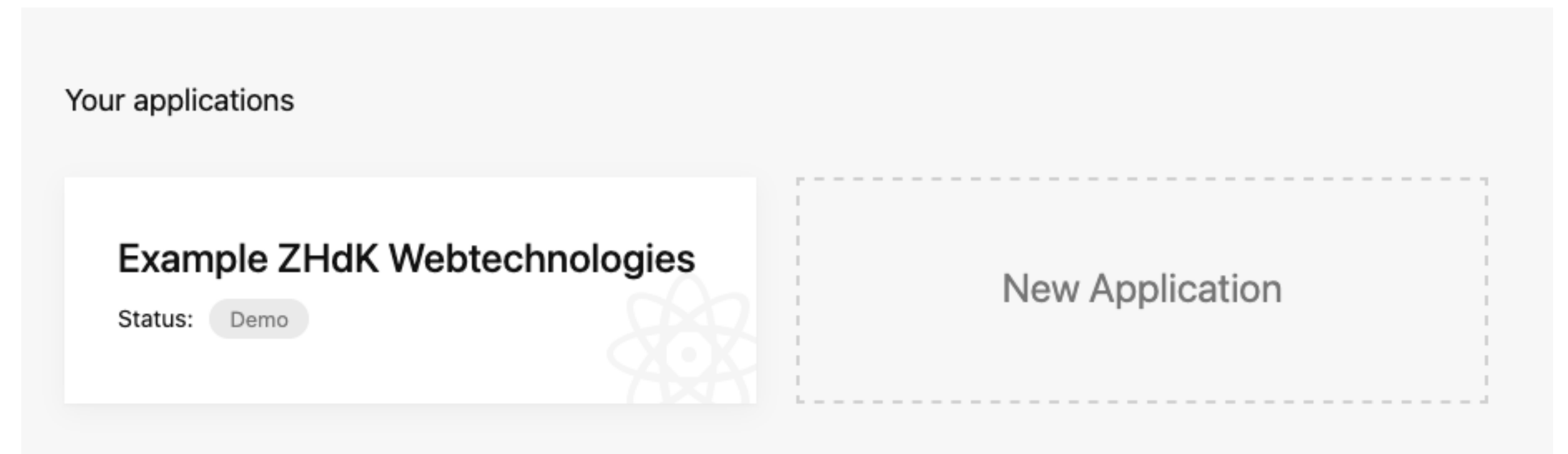
DATA FETCHING → UNSPLASH

- Example with Unsplash



UNSPLASH EXERCISE

- Create an account
- Move to «your apps» and create a new application



UNSPLASH EXERCISE

- Move to «Keys» and find your private keys
- Download Bruno API Client:
<https://www.usebruno.com/>

Keys

Application ID

61.

Access Key

aE'

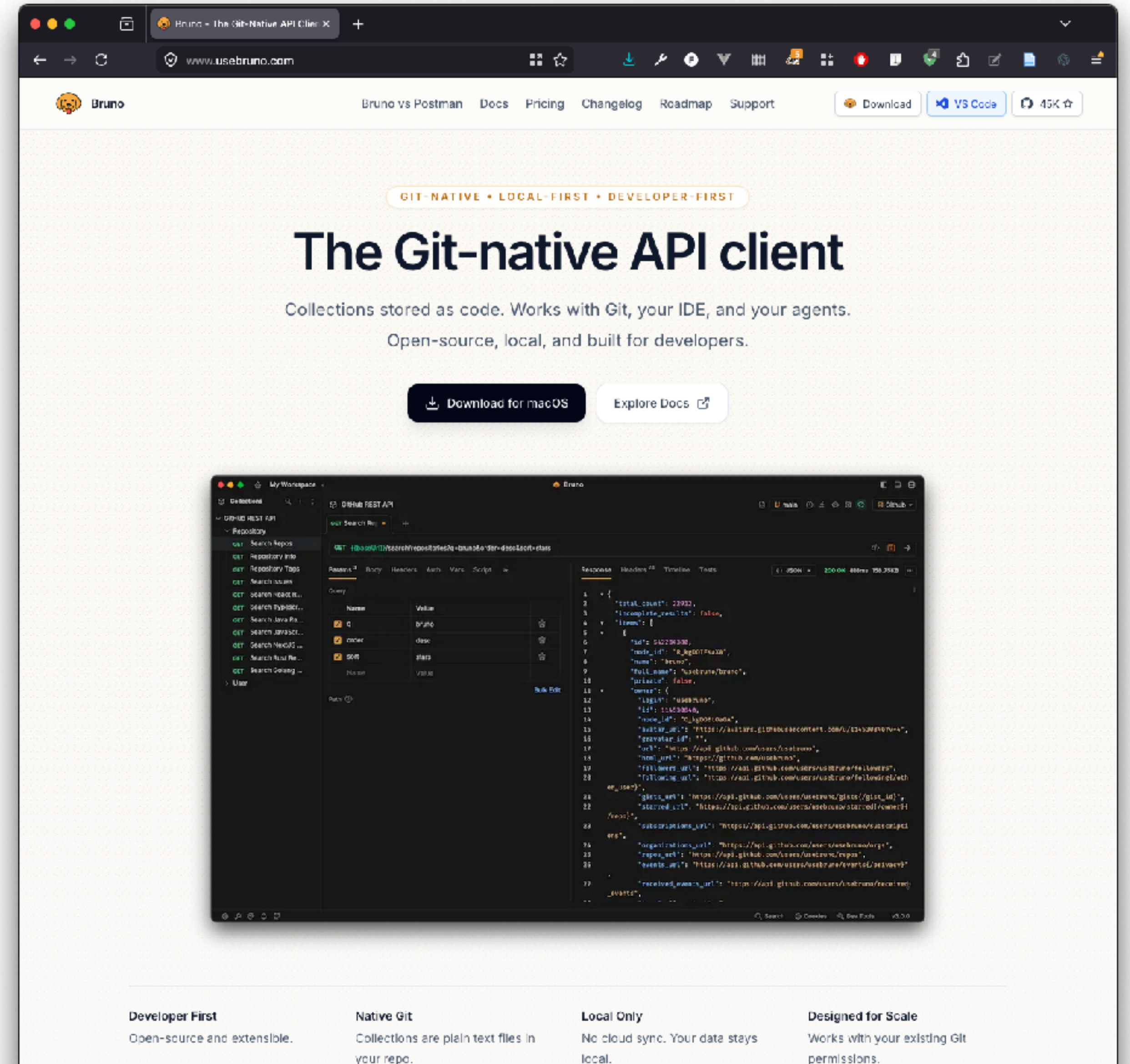
n9w

Secret key

c4

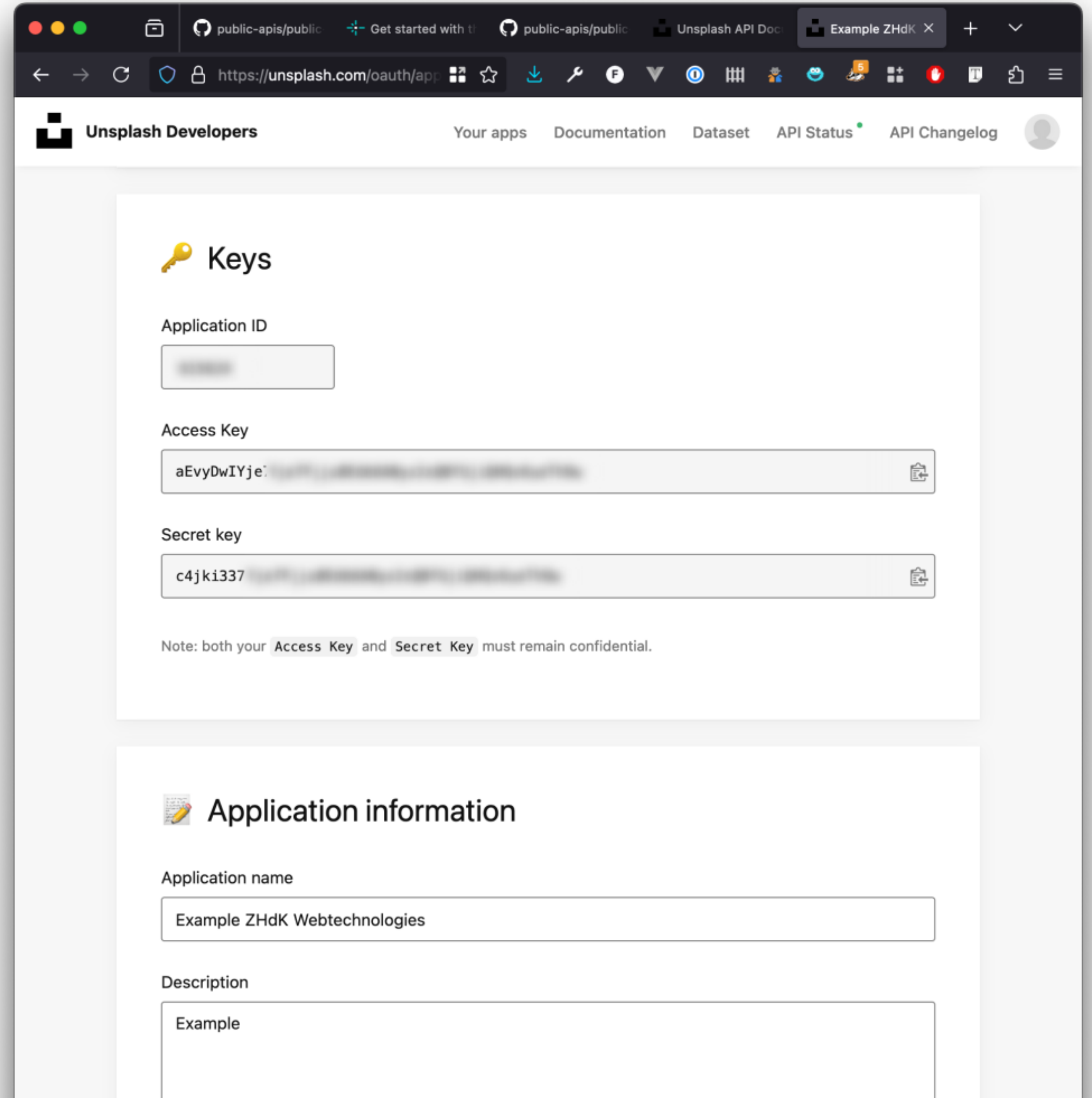
A small, dark, rectangular object, possibly a piece of wood or metal, with a rough, textured surface. It is positioned horizontally and appears to be a component or a sample being examined.

Note: both your **Access Key** and **Secret Key** must remain confidential.



DATA FETCHING → UNSPLASH

- Keep your keys secret at all times
- ⚠️ DON'T commit them to your public repository!



DATA FETCHING → API CLIENT

public-apis/public

Get started with t

public-apis/public

Unsplash API D X

Example ZHdK We

←

→

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https://unsplash.com/docu

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Your email **unsplash@jonasscheiwiller.ch** has not been confirmed. [Change email](#) or [Resend confirmation](#)

Unsplash Developers

Your appsDocumentationDatasetAPI StatusAPI Changelog

API Documentation

Getting started

[Creating a developer account](#)

[Registering your application](#)

[Libraries & SDKs](#)

[Guidelines & Crediting](#)

[Hotlinking](#)

[Deprecation policy](#)

Schema

[Location](#)

[Version](#)

[HTTP verbs](#)

[Error messages](#)

Authorization

Public authentication

Public Authentication

Most actions can be performed without requiring authentication from a specific user. For example, searching, fetching, or downloading a photo does not require a user to log in.

To authenticate requests in this way, pass your application's access key via the HTTP Authorization header:

Authorization: Client-ID YOUR_ACCESS_KEY

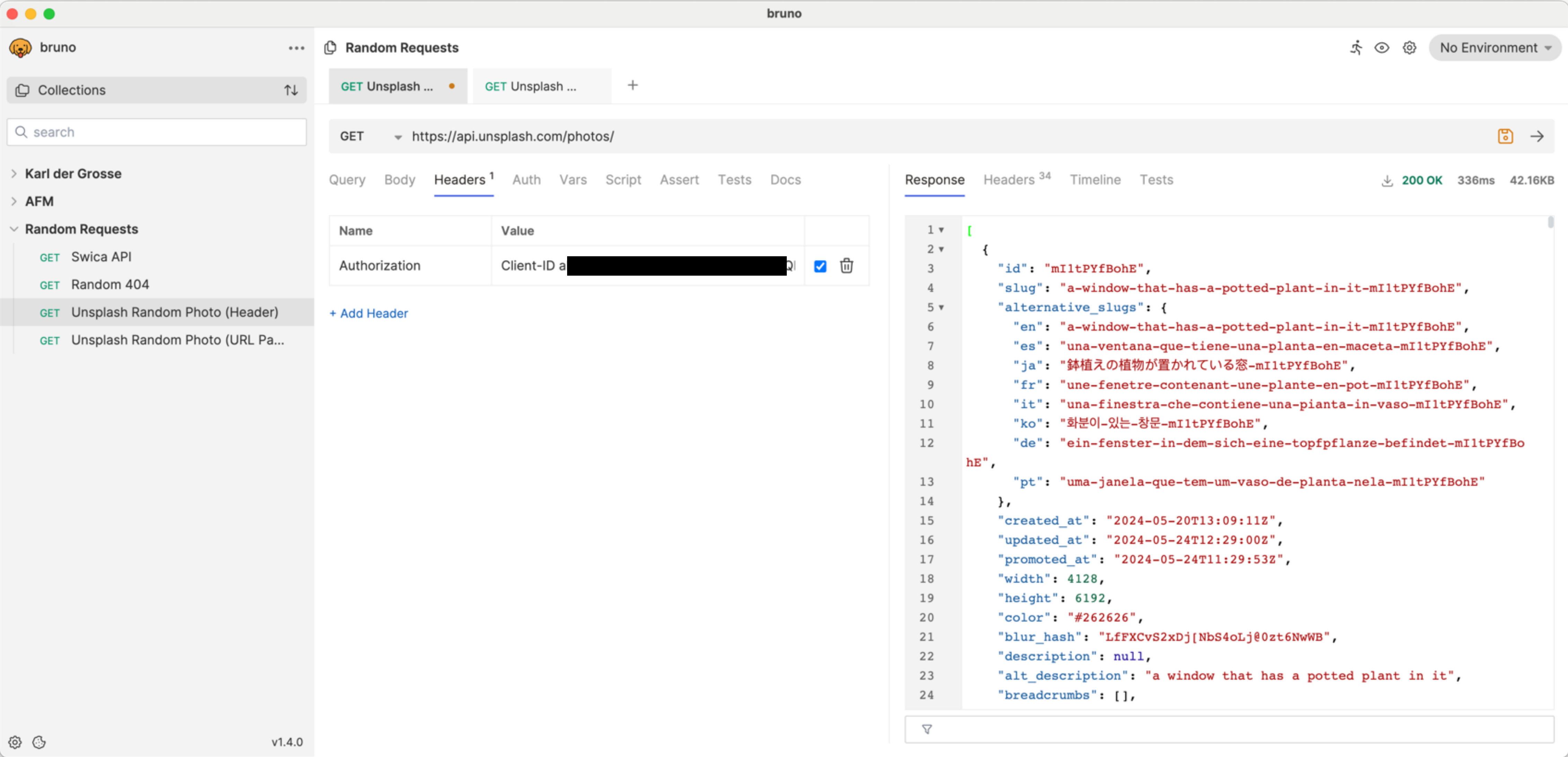
You can also pass this value using a `client_id` query parameter:

https://api.unsplash.com/photos/?client_id=YOUR_ACCESS_KEY

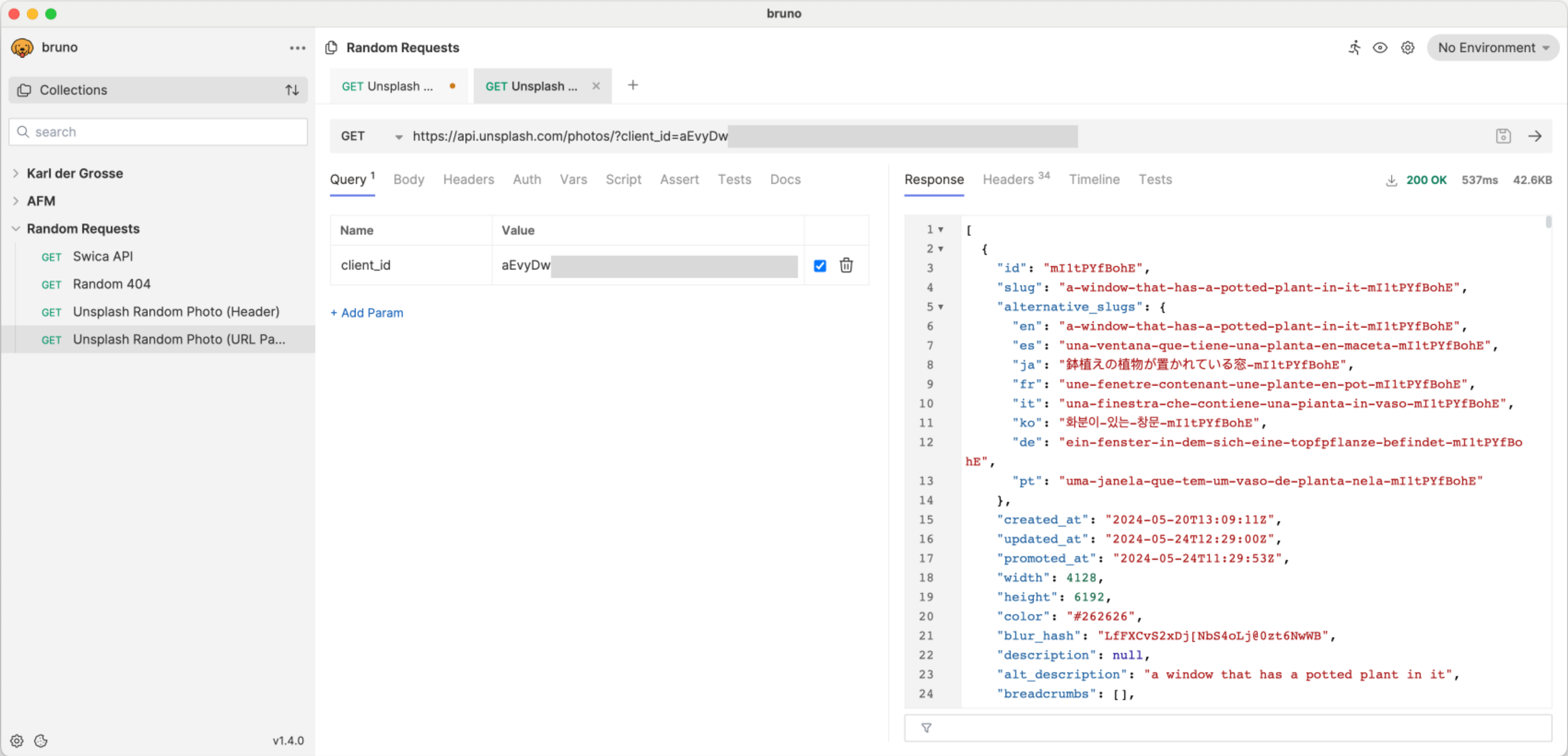
👉 Tip

Most Unsplash API applications use this form of authentication as it doesn't require users to login or join, and it's generally cacheable by our system, resulting in even

DATA FETCHING → API CLIENT (HEADER)



DATA FETCHING → API CLIENT (QUERY PARAM)

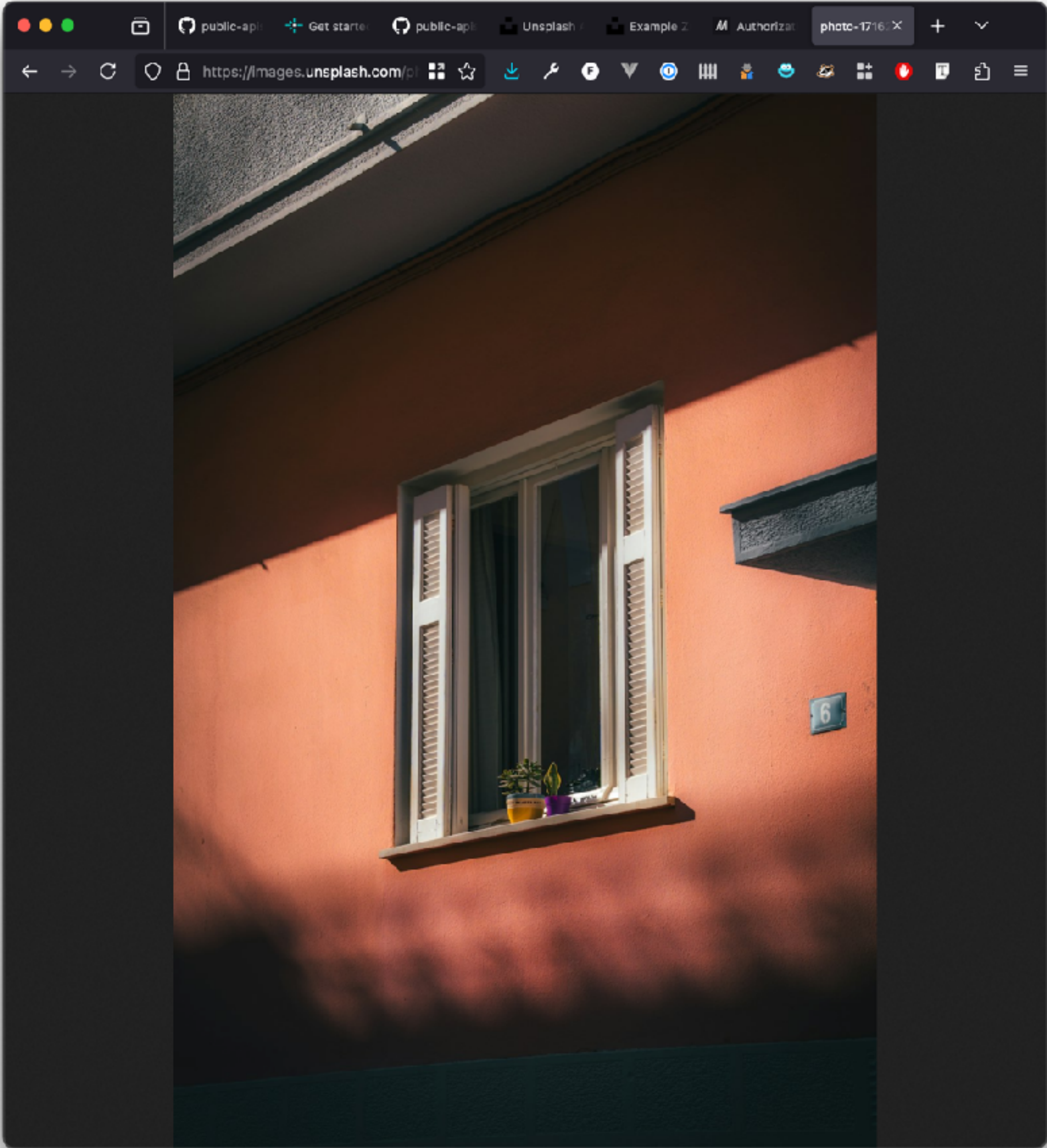


DATA FETCHING

Response Headers 34 Timeline Tests

200 OK 336ms 42.16KB

```
27     "full": "https://images.unsplash.com/photo-1716210180386-f2aca7dbe
28     "regular": "https://images.unsplash.com/photo-1716210180386-f2aca7
29     "small": "https://images.unsplash.com/photo-1716210180386-f2aca7db
30     "thumb": "https://images.unsplash.com/photo-1716210180386-f2aca7db
31     "small_s3": "https://s3.us-west-2.amazonaws.com/images.unsplash.co
32   },
33   "links": {
34     "self": "https://api.unsplash.com/photos/a-window-that-has-a-potte
35     "html": "https://unsplash.com/photos/a-window-that-has-a-potted-pl
36     "download": "https://unsplash.com/photos/mIltPYfBohE/download?ixid
37     "download_location": "https://api.unsplash.com/photos/mIltPYfBohE/
```



DATA FETCHING → STATS FOR A SPECIFIC PHOTO

Unsplash Developers

Your appsDocumentationDatasetAPI StatusAPI Changelog

Current user

[Get the user's profile](#)

[Update the current user's profile](#)

Users

[Get a user's public profile](#)

[Get a user's portfolio link](#)

[List a user's photos](#)

[List a user's liked photos](#)

[List a user's collections](#)

[Get a user's statistics](#)

Photos

[List photos](#)

[Get a photo](#)

[Get a random photo](#)

[Get a photo's statistics](#)

[Track a photo download](#)

[Update a photo](#)

[Like a photo](#)

[Unlike a photo](#)

Search

[Search photos](#)

[Search collections](#)

[Search users](#)

Collections

[List collections](#)

[Get a collection](#)

Get a photo's statistics

Retrieve total number of downloads, views and likes of a single photo. You can also get a historical breakdown of these stats in a specific timeframe.

GET /photos/:id/statistics

param	Description
id	The public id of the photo. Required.
resolution	The frequency of the stats. (Optional; default: "days")
quantity	The amount of for each stat. (Optional; default: 30)

Currently, the only resolution param supported is "days". The quantity param can be any number between 1 and 30.

Response

200 OK

X-Ratelimit-Limit: 1000

X-Ratelimit-Remaining: 999

```
{  "id": "LF8gK8-HGSg",  "downloads": {    "total": 49771,    "historical": {      "change": 1474, // total number of downloads for the past 30 days      "resolution": "days",    }  }}
```

GEThttps://api.unsplash.com/photos/i3eSu5VfNLo/statistics

QueryBodyHeaders¹AuthVarsScriptAssertTestsDocs

Name	Value
------	-------

+ Add Param

Response

Headers³¹TimelineTests

```
1 {2   "id": "i3eSu5VfNLo",3   "slug": "a-man-riding-a-wave-on-top-of-a-surfboard-i3eSu5VfNLo",4   "downloads": {5     "total": 49771,6     "historical": {7       "change": 1474, // total number of downloads for the past 30 days8       "resolution": "days",9     }10   }
```

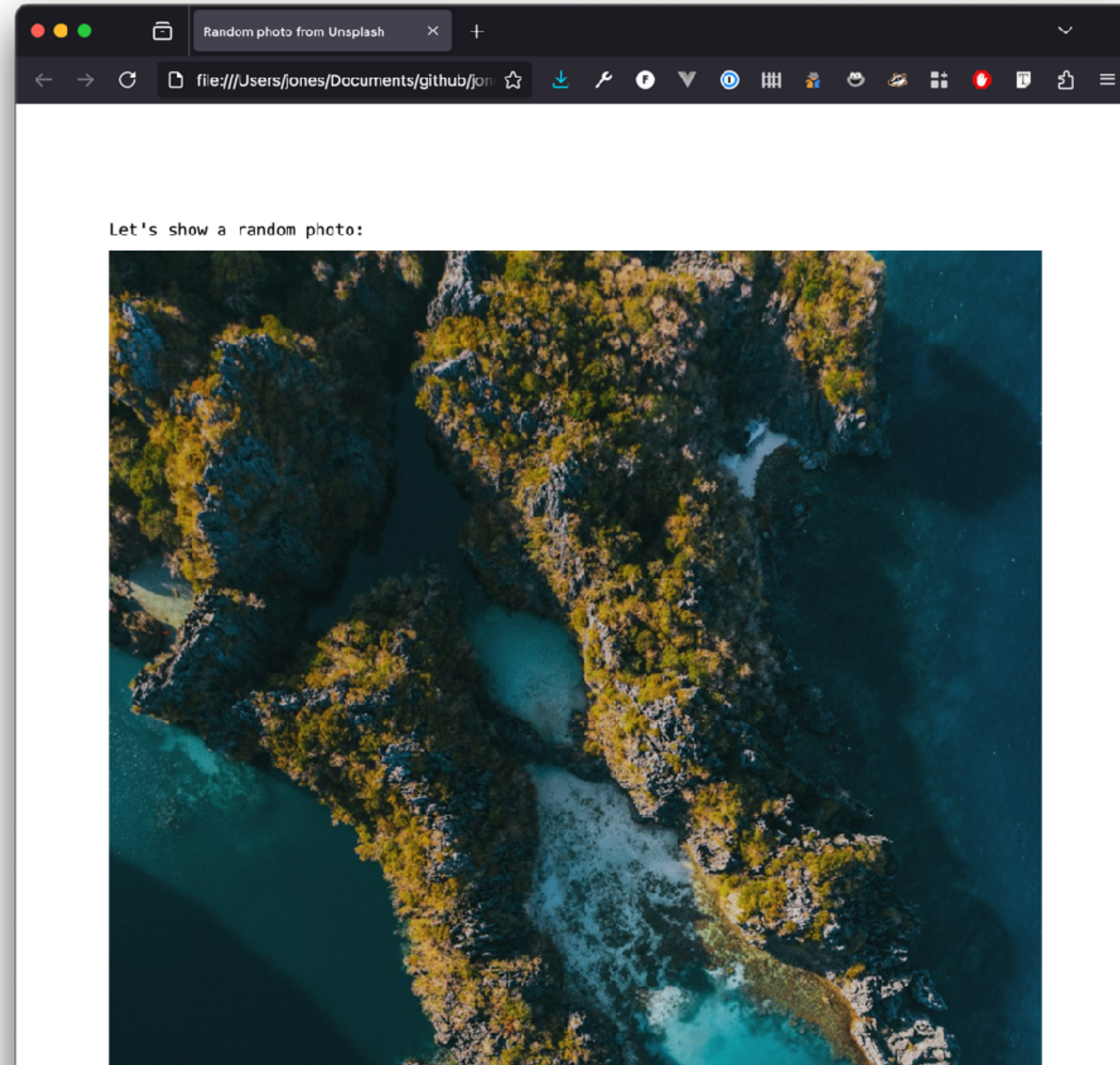
Tim Mossholder

Available for hire

Download



DATA FETCHING → IN JAVASCRIPT



EXERCISE 17

- Take starter files from:
<https://short.jonasscheiwiller.ch/ex17>
- 2 Groups:
 - With AI-support
 - No AI-support
- Use Open Library API to fetch books with the users input and display them on screen.

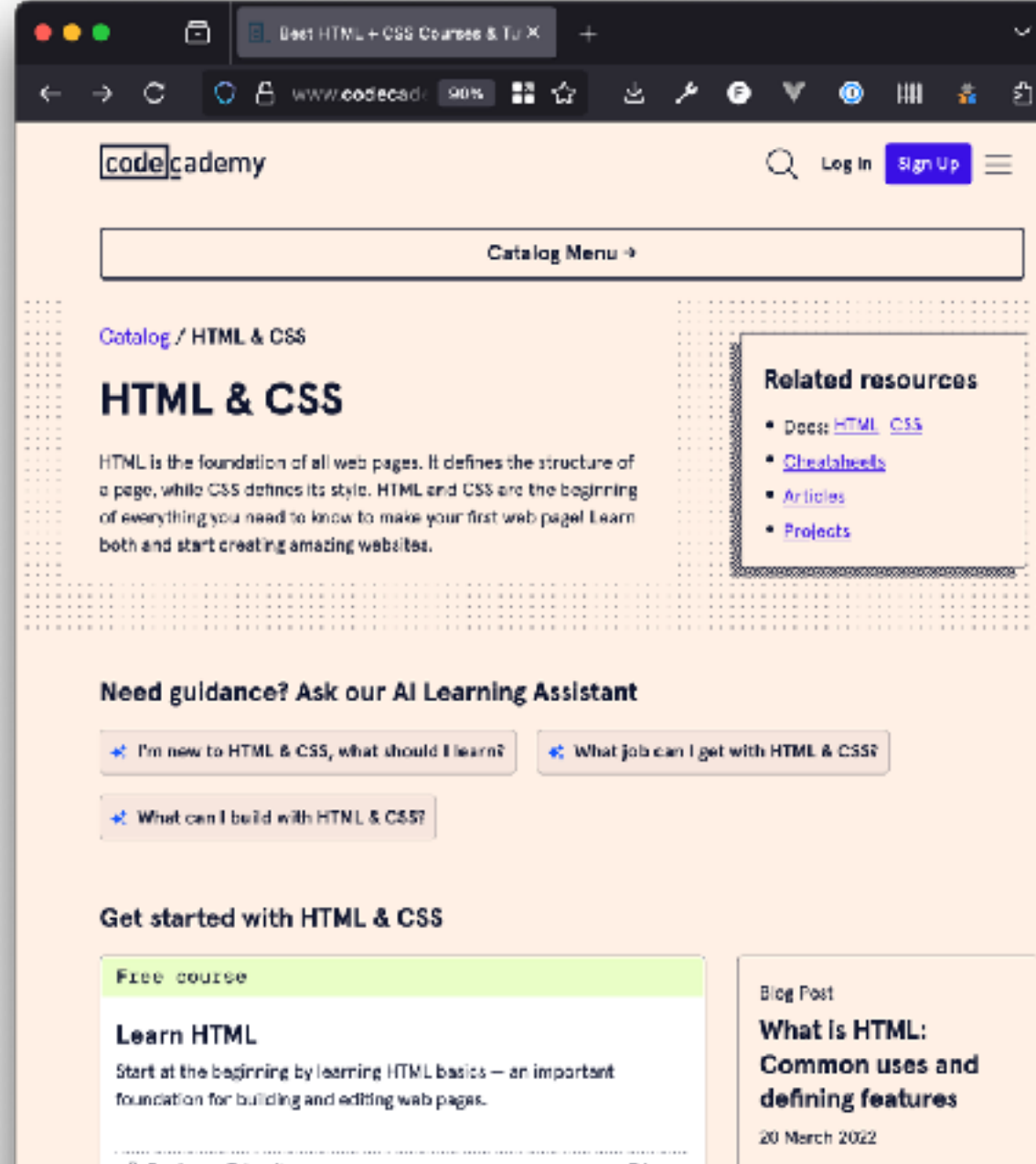
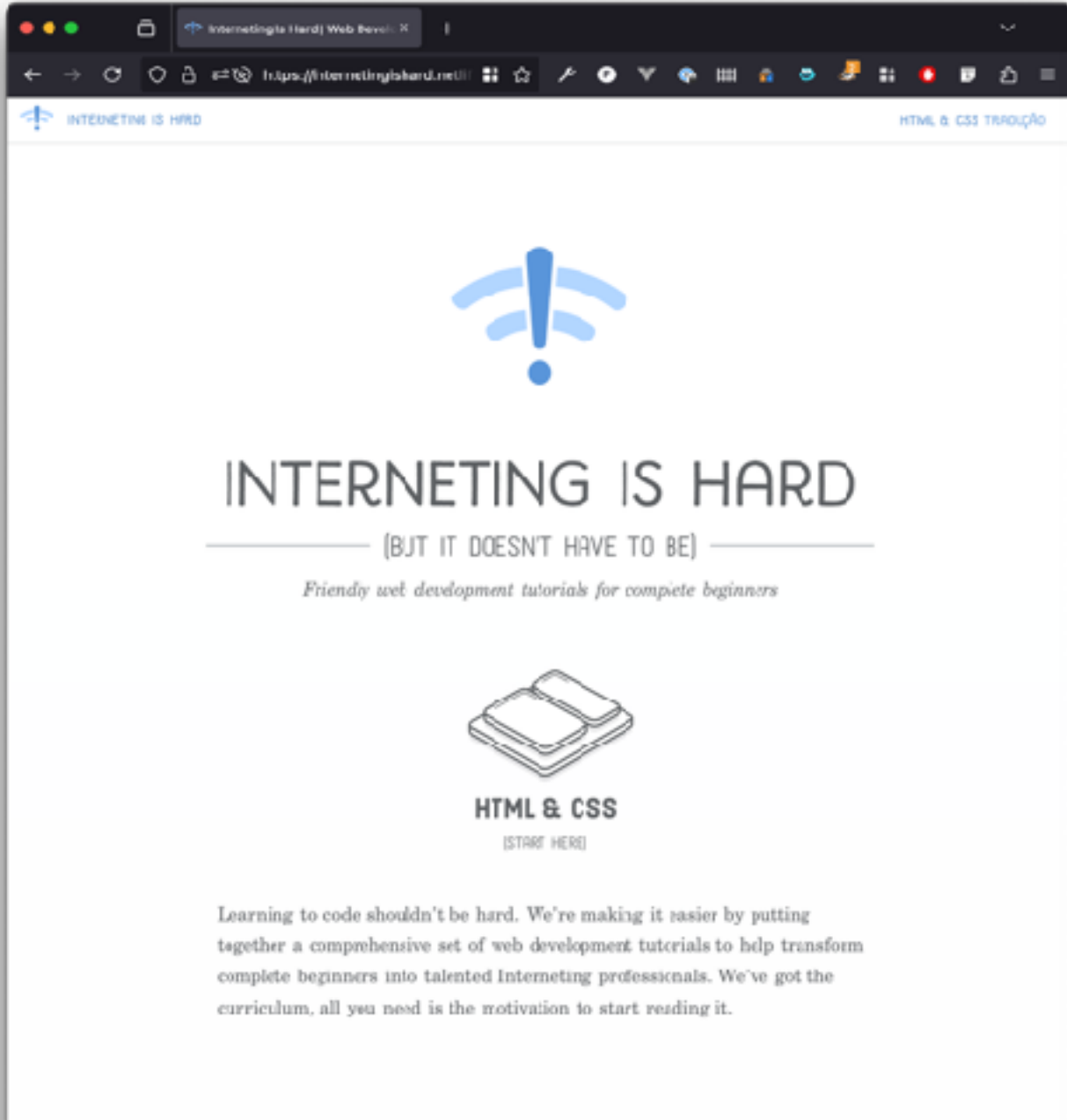
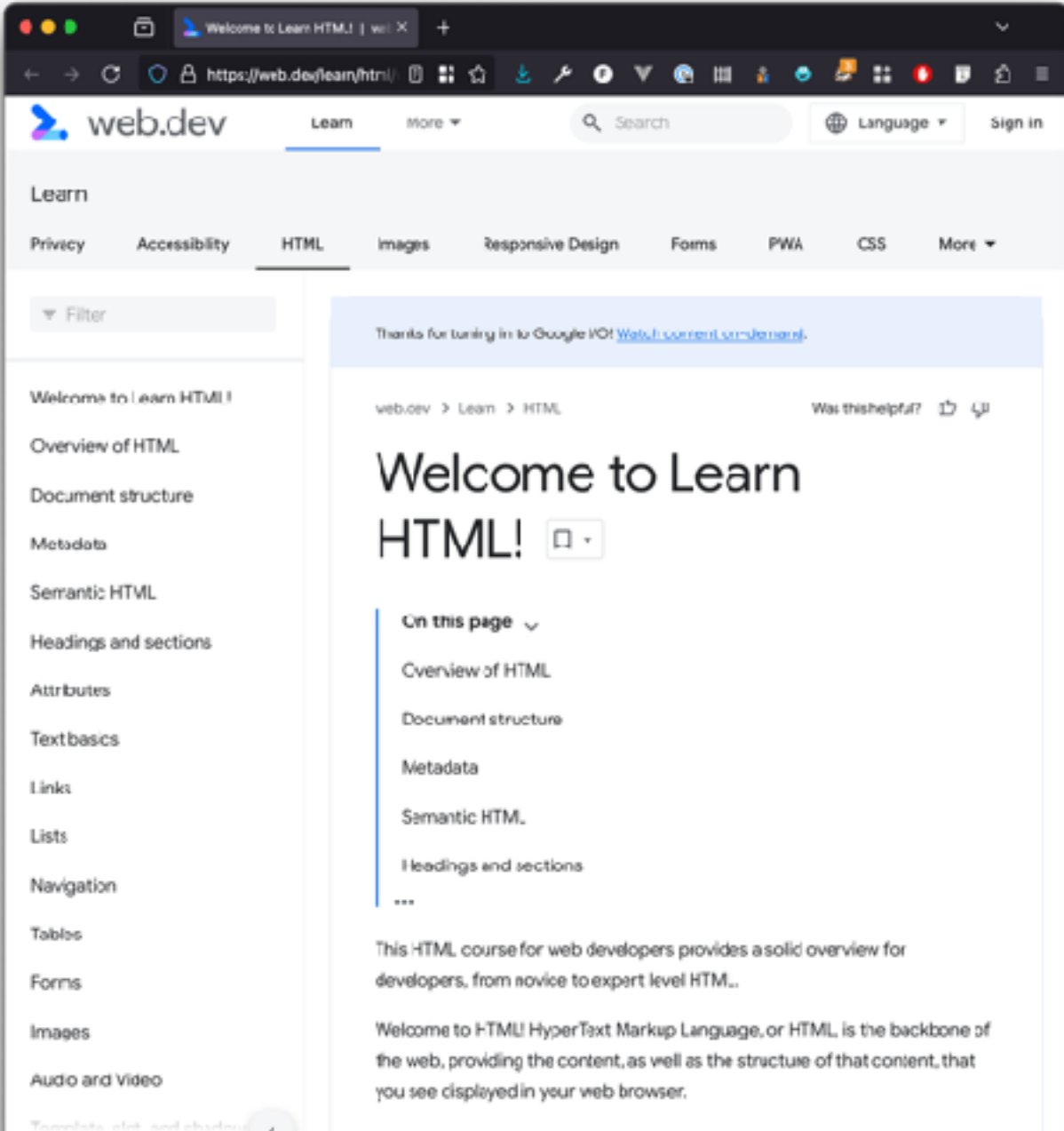
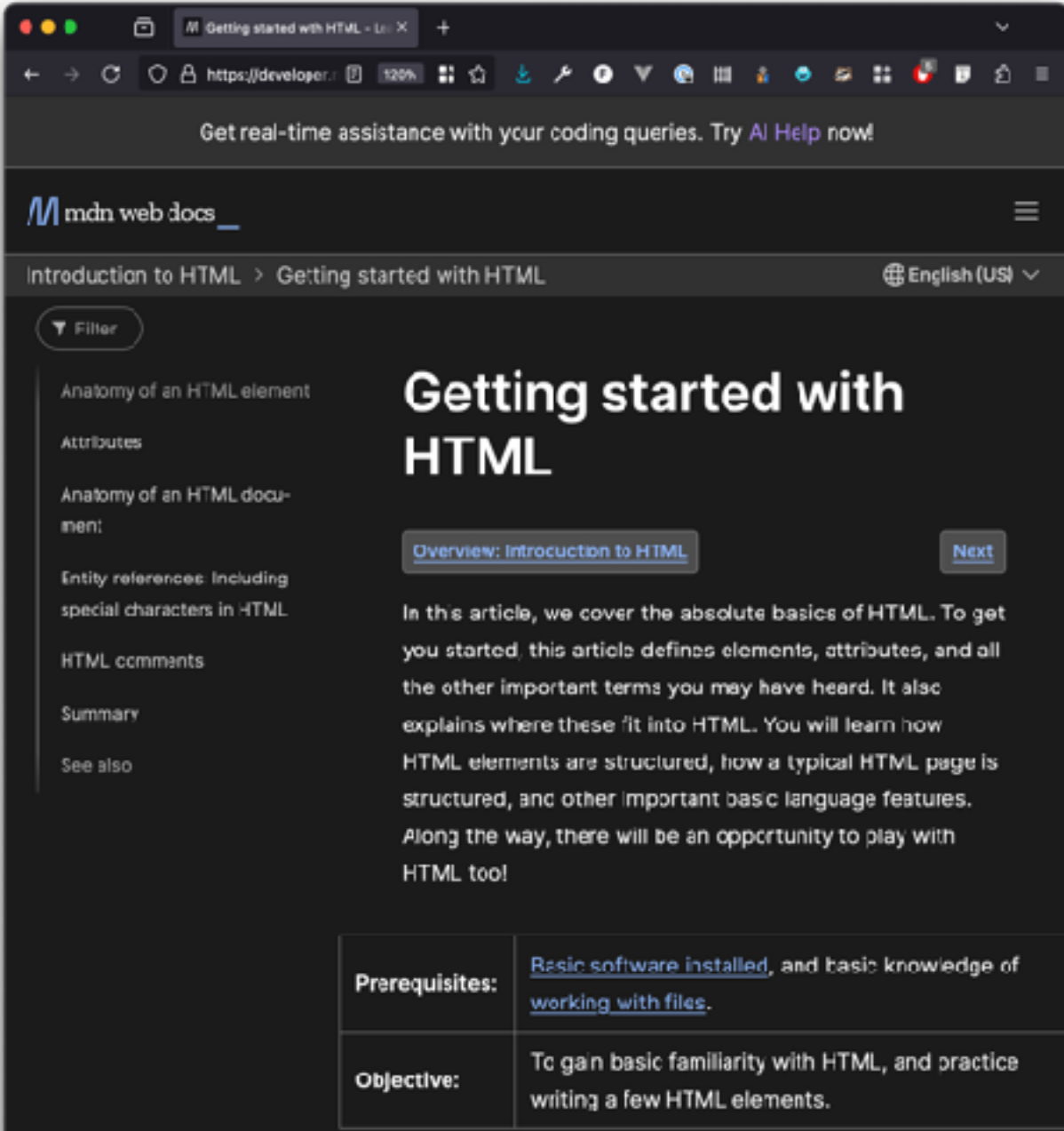
Book Search

EXERCISE 18

- Solve JavaScript exercises:
 - longest-word
 - shopping-cart
 - dom-events1, dom-events2, dom-events3

SELF STUDY

- https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/Getting_started
- <https://web.dev/learn/html/welcome>
- <https://internetingishard.netlify.app/>
- <https://www.codecademy.com/catalog/language/html-css>
- <https://javascript.info/>



FINAL EXERCISE

- Create your portfolio website
 - It should contain a CMS to add new projects
 - It should be online by the end of the course/for the presentation
 - It should follow best practices regarding accessibility.
 - Start with a plan, fragment project into single steps
 - Don't get lost in design, you can still refactor later