

Data Subjects' Reactions to Exercising Their Right of Access

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Data Access: Fundamental to Privacy



1974



1980



1998



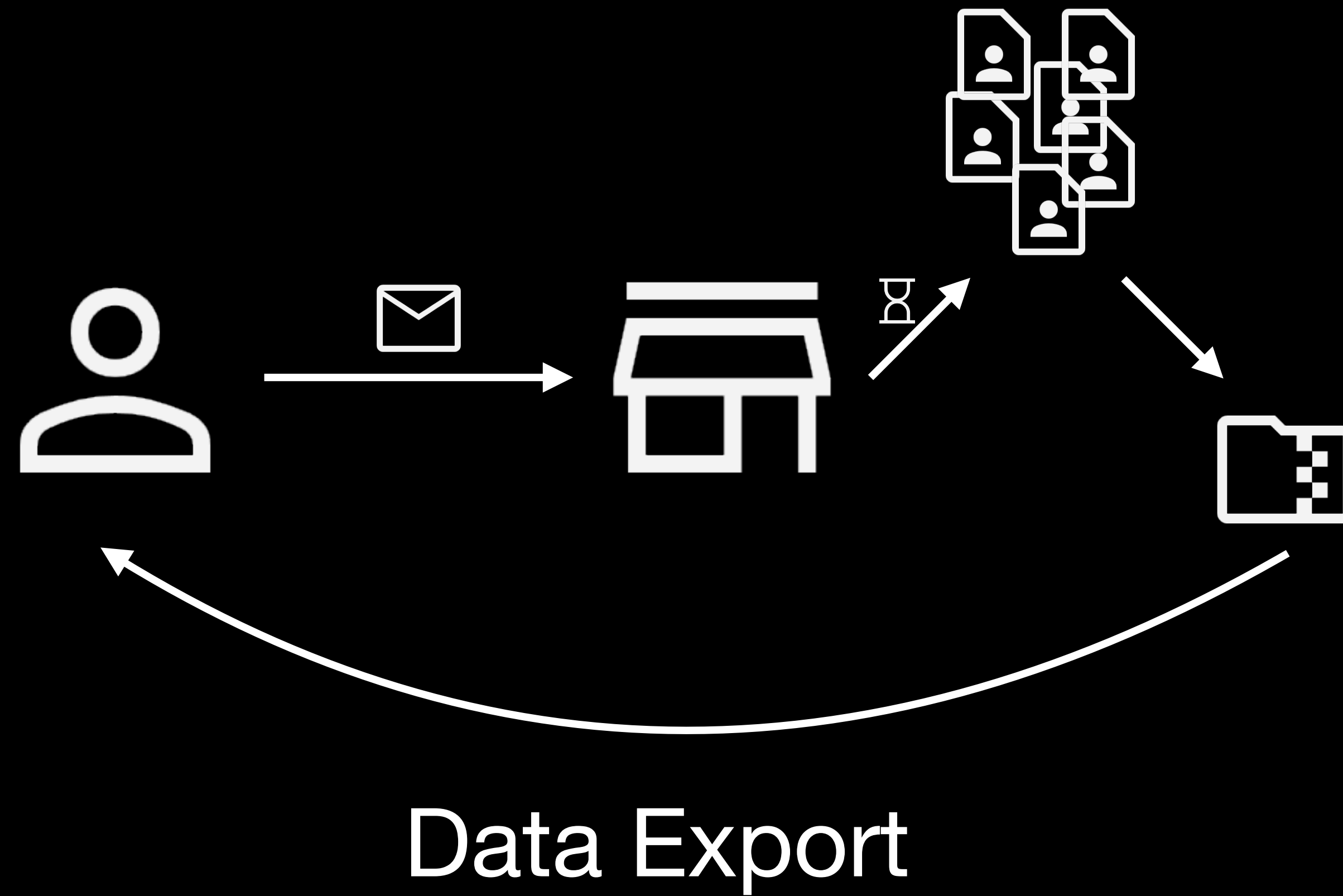
2016



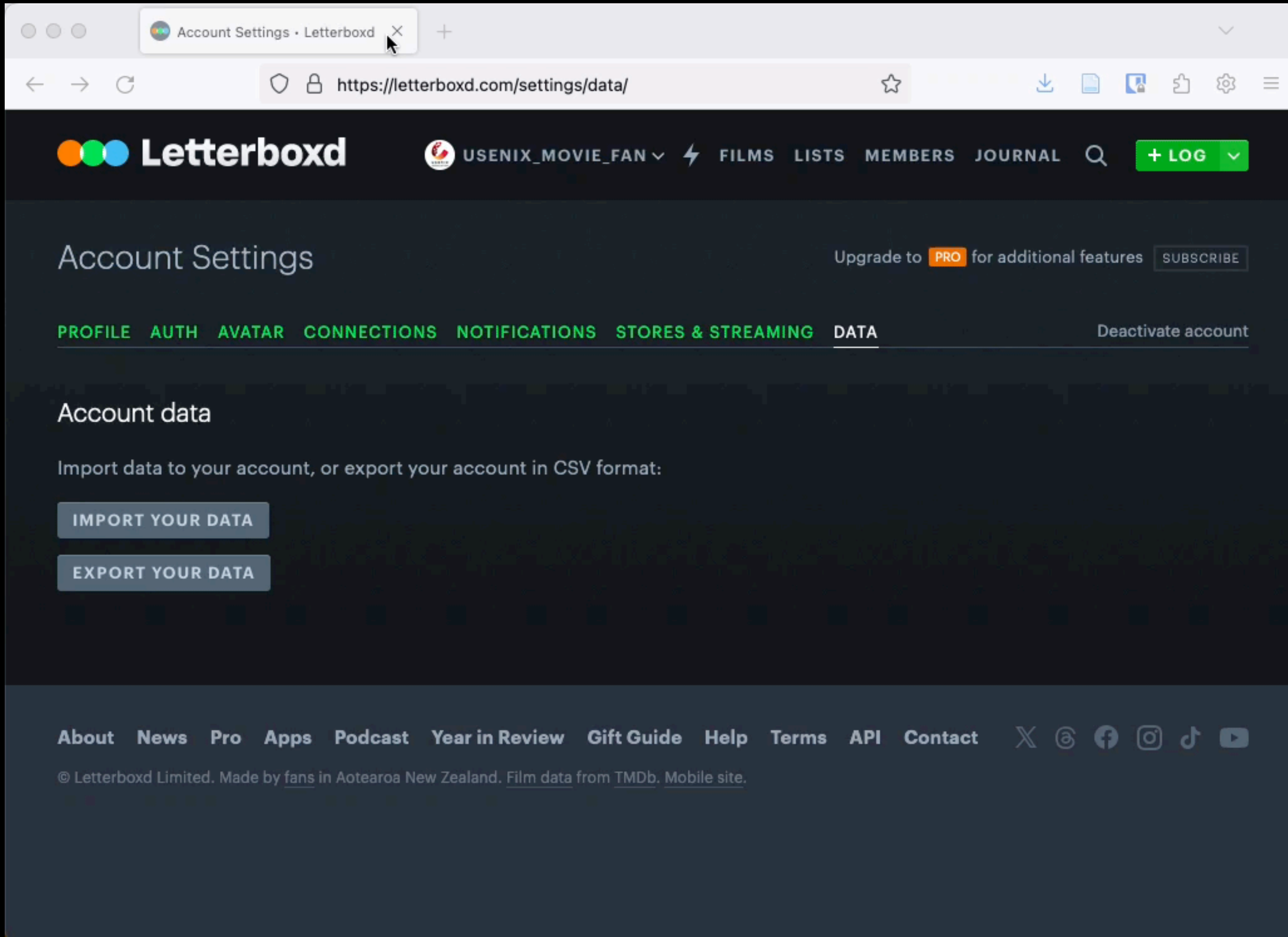
2020



Data Subject Access Requests (DSAR)



Data Subject Access Requests (DSAR)



Account Settings • Letterboxd

https://letterboxd.com/settings/data/

Letterboxd USENIX_MOVIE_FAN FILMS LISTS MEMBERS JOURNAL + LOG

Account Settings Upgrade to PRO for additional features SUBSCRIBE

PROFILE AUTH AVATAR CONNECTIONS NOTIFICATIONS STORES & STREAMING DATA Deactivate account

Account data

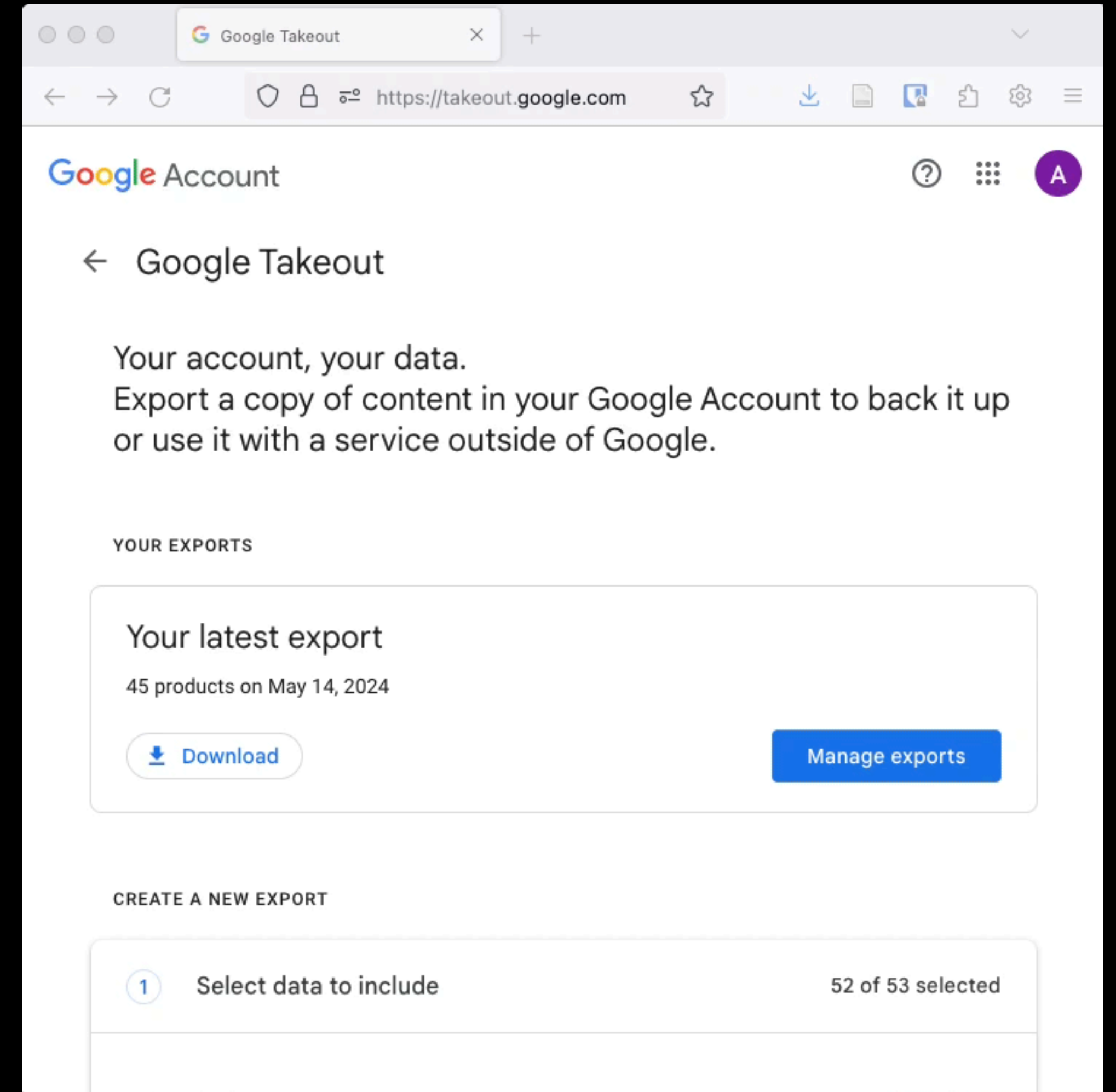
Import data to your account, or export your account in CSV format:

IMPORT YOUR DATA

EXPORT YOUR DATA

About News Pro Apps Podcast Year in Review Gift Guide Help Terms API Contact

© Letterboxd Limited. Made by fans in Aotearoa New Zealand. Film data from TMDb. Mobile site.



Google Takeout

https://takeout.google.com

Google Account

← Google Takeout

Your account, your data.
Export a copy of content in your Google Account to back it up or use it with a service outside of Google.

YOUR EXPORTS

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45 products on May 14, 2024

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CREATE A NEW EXPORT

1 Select data to include 52 of 53 selected

Data Exports Vary!

Archive for arthurborem@uchicago.edu

May 14, 2024, 11:42:42 AM PDT • 3.1 GB • [Learn more](#) about Google archives and your [deleted data](#)

- Google Play Books
No data found
- Google Play Console
No data found
- Google Play Games Services
No data found
- Google Play Movies & TV
5 files, less than 1 MB
- Google Play Store
3 files, less than 1 MB
- Google Shopping

Google Play Store
3 files exported successfully

About this export | **Exported files** | File formats

Some file formats (e.g. html, png) will be viewable in your browser, and will appear as clickable links below that will open the file once you've fully extracted your archive. Other file types can be opened by their appropriate applications by navigating through the archive's directory. You can click on any folders that may be present to see their contents.

Data that are still in the process of being deleted are not included in your archive. [Learn more](#) about your deleted data.

- Library.json
- Play Settings.json
- Purchase History.json

ggy Day Care,Dog Walking

ments USD 0.00\n"\tStandard Rate

Additional Dog Rate USD 36.00\n"\tPuppy

SD 21.00\n"\tCat Care USD

thing / Grooming USD 0.00\n"\tSitter

are USD 0.00\n"\tCost Adjustments

Holiday Rate USD 36.00\n"\tAdditional

SD 33.00\n"\tAdditional Cat USD

led Stay Rate USD 0.00\n"\tCost

USD 17.00\n"\tHoliday Rate USD

ional Dog Rate USD 11.00\n"\tPuppy Rate

at Care USD 16.00\n"\tExtended

USD 0.00\n"\tCost Adjustments USD

ay Rate USD 40.00\n"\tAdditional Dog

7.00\n"\tBathing / Grooming USD

n"\tCost Adjustments USD

ay Rate USD 15.00\n"\t60 minute rate

tPuppy Rate USD 14.00\n'

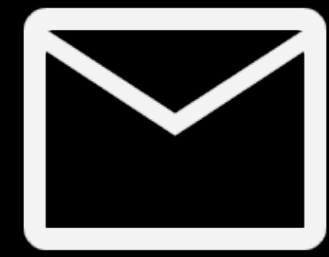
Research Questions

1. How complex are data exports?
2. What do users want? Are they getting it?
3. How do users react? Are data exports effective?
4. What actions do users want to take?

Study Design



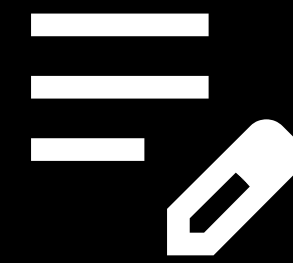
Uber



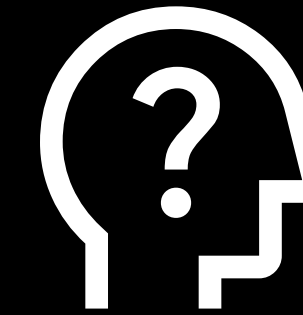
DSAR



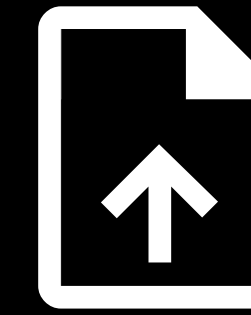
Questions



Annotation



Reflection



Submission

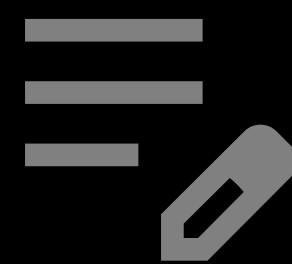
What do users want from data exports? Are they getting it?



DSAR



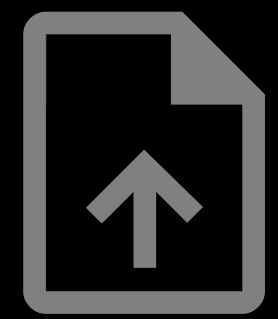
Questions



Annotation

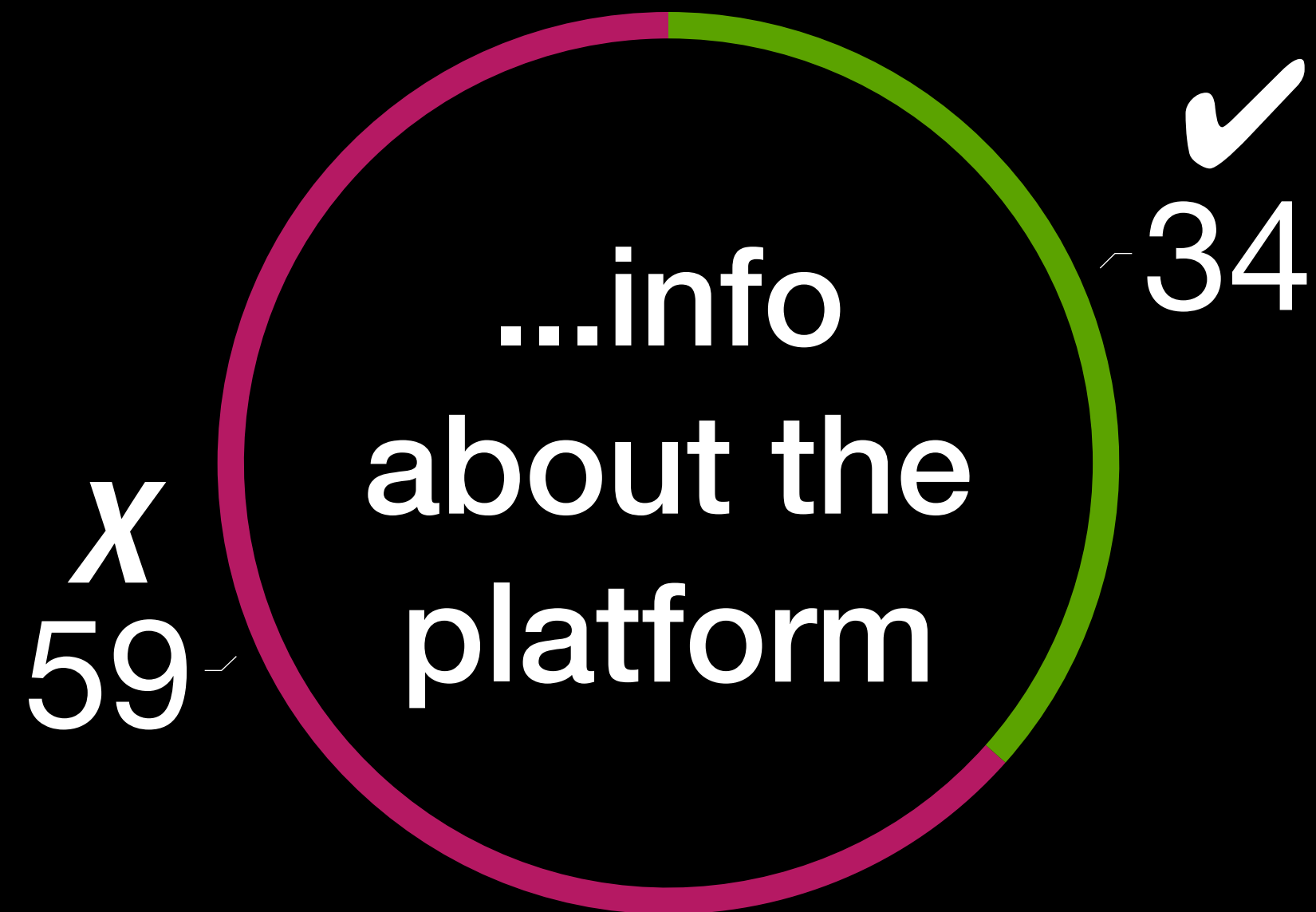


Reflection



Submission

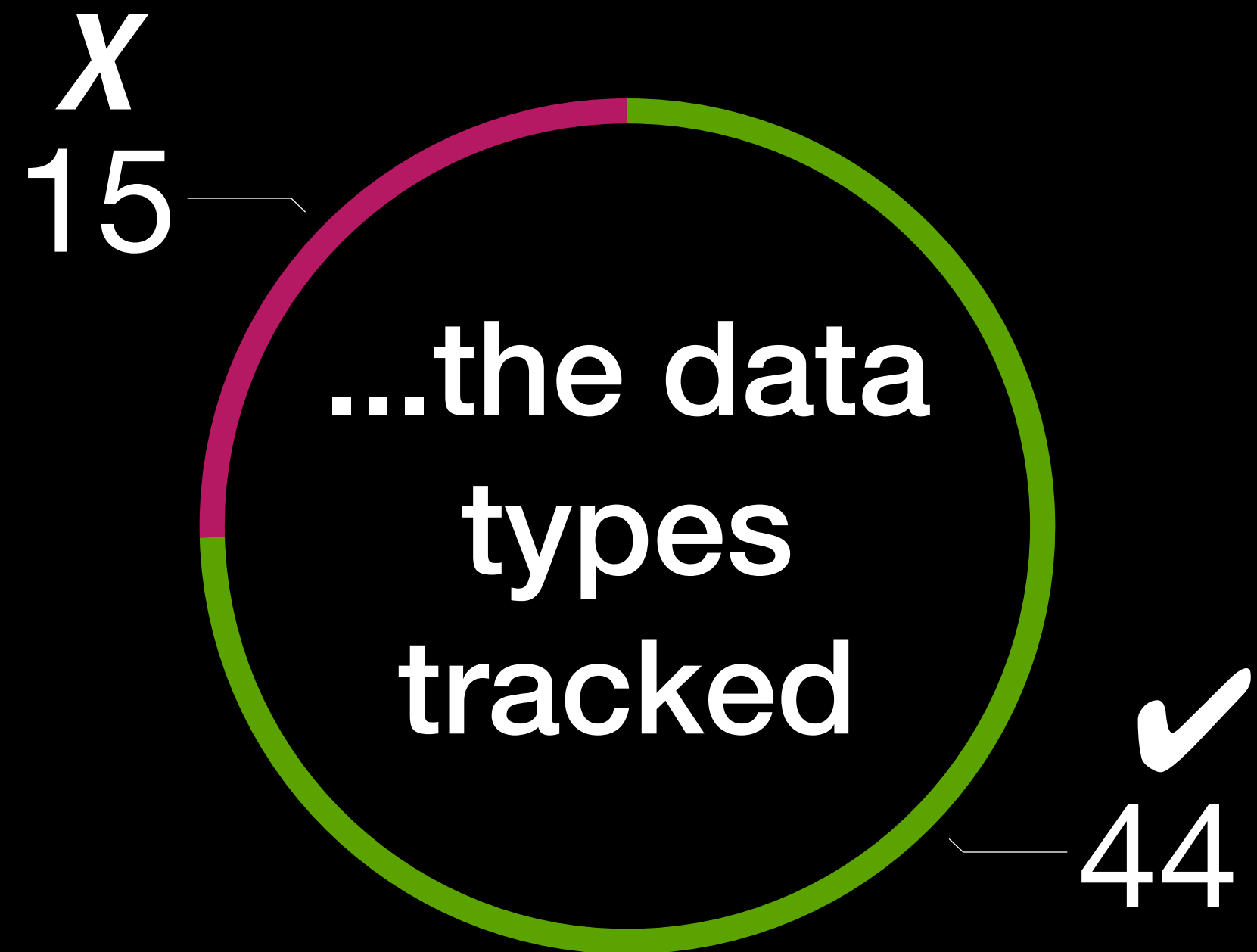
Users want to know...



✓ *"Is my data anonymous?"*
- Google

X *"Does Uber sell client data
to telemarketers?"* - Uber

Users want to know...



✓ *"Is my location stored in the data?" - Uber*

X *"Do they listen through my microphone?" - Facebook*

Users want to know...



✓ "What are the most frequently visited websites, apps, or services in my browsing history...?" - Google

X "Would my recommendations change if my IP changed?" - Spotify

Takeaways from users' reactions to data exports



2023_2.json x | v

Upload zip file Clear all data Search for a term... x go ↑ ↓ 0 out of 0

ts: 2022-04-12T17:19:00Z

username: arthursbb

C.2 platform: iOS 15.4.1 (iPhone13,1)

ms_played: 218600

conn_country: US

ip_addr_decrypted: 172.58.141.134

user_agent_decrypted: unknown

C.1 master_metadata_track_name: Clube Da Esquina Nº 2

C.1 master_metadata_album_artist_name: Milton Nascimento

C.1 master_metadata_album_album_name: Clube Da Esquina

spotify_track_uri: spotify:track:1sdW2whJr8CLa6bMA67LPQ

episode_name: null

episode_show_name: null

spotify_episode_uri: null

reason start: trackdone

previous 1 2 3 4 5 6 7 ... 7458 7459 7460 next

Instructions

Your notes

Add note

C.2 x

Huh... I have an iPhone 12 mini, not a 13? Also why and how do they know this?

Creepy

C.1 x

Wow, one of my favorite albums!

Interesting

All notes

Submit

Overwhelming, Confusing, and Distrust

The image shows a file explorer window on the left and a code editor window on the right. The file explorer window is titled 'Takeout 2' and shows a list of files and folders. The code editor window is titled 'your_recently_used_emojis.json' and shows the content of the file. Two callout boxes highlight specific JSON fields: 'Emoji usage statistics' and 'ent_field_name'.

```
1 {
2   "media": [
3
4   ],
5   "label_values": [
6     {
7       "ent_field_name": "UsageMap",
8       "label": "statistics",
9       "dict": [
10        {
11          "ent_field_name": "UsageMap.key",
12          "label": "\u00f0\u009f\u0098\u008f",
13          "dict": [
14            {
15              "ent_field_name": "UsageMapUsageMap.value.total_count",
16              "label": "total_count",
17              "timestamp_value": "1",
18            },
19            {
20              "ent_field_name": "UsageMapUsageMap.value.last_
21              "label": "last_used",
22              "timestamp_value": 1510452362
23            }
24          ]
25        }
26      ]
27    }
28  ]
29 }
```

"Emoji usage statistics",

"ent_field_name": "UsageMap",

"ent_field_name": "UsageMapUsageMap.value.total_count",

"label": "total_count",

"timestamp_value": "1"

"ent_field_name": "UsageMapUsageMap.value.last_

"label": "last_used",

"timestamp_value": 1510452362

Line 1, Column 1; Detect Indentation: Setting indentation to 2 spaces



Overwhelming, Confusing, and Distrust

Fine-grained
data deletion

+

Data justification



```
your_recently_used_emojis.json UNREGISTERED
your_recently_used_emojis.json x
1 {
2   "media": [
3
4   ],
5   "label_values": [
6     {
7       "ent_field_name": "UsageMap",
8       "label": "Emoji usage statistics",
9       "dict": [
10        {
11          "ent_field_name": "UsageMap.key",
12          "label": "\u00f0\u009f\u0098\u008f",
13          "dict": [
14            {
15              "ent_field_name": "UsageMapUsageMap.value.total_count",
16              "label": "total_count",
17              [REDACTED]
18            },
19            {
20              "ent_field_name": "UsageMapUsageMap.value.last_used",
21              "label": "last_used",
22              [REDACTED]
23            }
24          ]
25        }
26      ]
27    }
28  ]
29 }
```

Line 1, Column 1; Detect Indentation: Setting indentation to 2 spaces Spaces: 2 JSON

Self-Discovery, Memories, and Nostalgia

```
Inferences.json
1 {
2   "inferences": [
3     "1P_Custom_Affin",
4     "1P_Custom_Comcas",
5     "1P_Custom_GenZ [I",
6     "1P_Custom_Samsu",
7     "1P_Custom_iOS_M",
8     "1P_Custom_iPhone",
9     "BRAND_US_HULU_Q",
10  ]
11 }
```

Line 1, Column 1

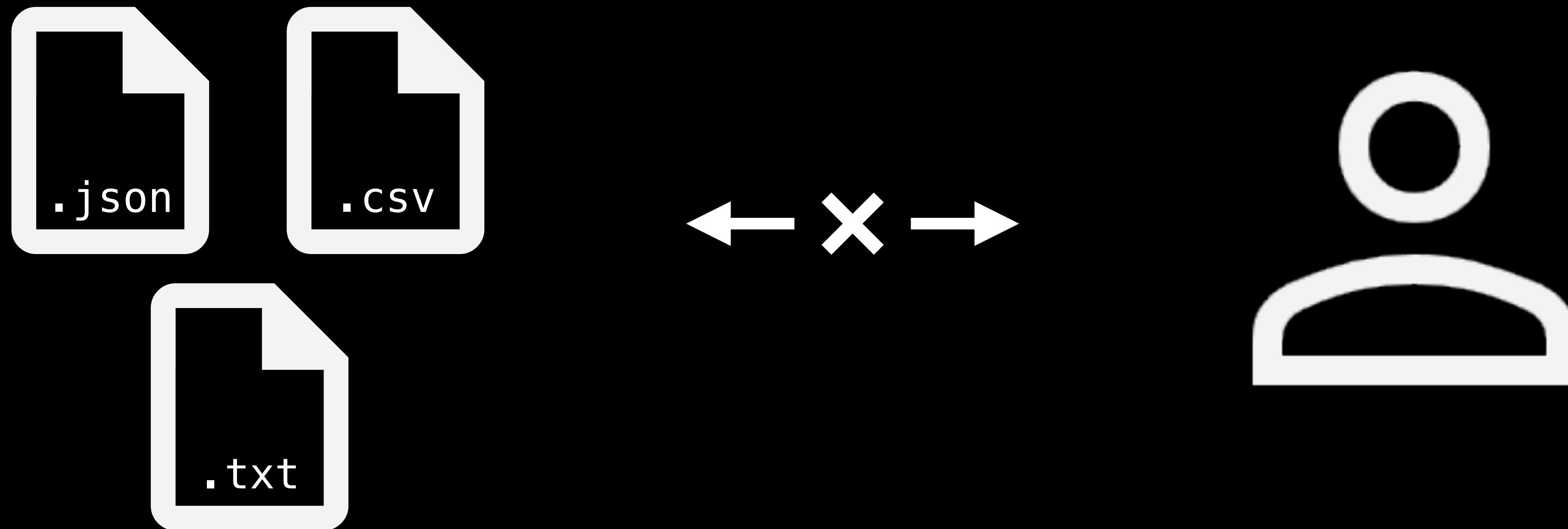
```
your_recently_followed_history.json UNREGISTERED
your_recently_followed_history.json
1 {
2   "media": [
3
4   ],
5   "label_values": [
6     {
7       "ent_field_name": "SeedToFeatures",
8       "label": "Recently followed accounts and the date they were followed",
9       "vec": [
10        {
11          "dict": [
12            {
13              "label": "Followed Account",
14              "value": "HackMIT"
15            },
16            {
17              "label": "Date Followed",
18              "value": "Sep-17-2017"
19            }
20          ]
21        },
22        {
23          "dict": [
24            {
25              "label": "Followed Account",
```

Line 28, Column 14

Spaces: 2 JSON

Looking ahead: Making data exports usable and actionable

Machine vs. Human Readability



1. Definitions and explanations in-band

```
Users > arthur > Downloads > _archive
389797 "spotify_episode_uri": null,
389798 "reason_start": "trackerror",
389799 "reason_end": "endplay",
389800 "shuffle": true,
389801 "skipped": true,
389802 "offline": false,
389803 "offline_timestamp": 1681915624,
389804 "incognito_mode": false
389805 },
389806 {
389807 "ts": "2023-04-19T15:10:06Z",
389808 "username": "arthursbb",
389809 "platform": "osx",
389810 "ms_played": 3882,
389811 "conn_country": "US",
389812 "ip_addr_decrypted": "98.206.160",
389813 "user_agent_decrypted": "unknown",
389814 "master_metadata_track_name": "S",
389815 "master_metadata_album_artist_na",
389816 "master_metadata_album_album_na",
389817 "spotify_track_uri": "spotify:tr",
389818 "episode_name": null,
389819 "episode_show_name": null,
389820 "spotify_episode_uri": null,
389821 "reason_start": "clickrow",
389822 "reason_end": "remote",
389823 "shuffle": false,
389824 "skipped": false,
389825 "offline": false,
389826 "offline_timestamp": 1681917002,
389827 "incognito_mode": false
389828 },
389829 {
389830 "ts": "2023-04-19T16:22:48Z",
389831 "username": "arthursbb",
389832 "platform": "ios",
389833 "ms_played": 27093,
389834 "conn_country": "US",
```



This is a UNIX timestamp. It's the same as April 19, 2023 at 19:58am (CST). We keep it in milliseconds to maintain consistency across your devices.

Search...

Track	Album artist	Track start time	+
▼ I Got the News	Steely Dan	04/19/2023 at 9:52 AM (CST)	
▼ Midnight Sun	Nilüfer Yanya	04/19/2023 at 10:01 AM (CST)	
▲ Salty Road Dogs Victory Anthem	Alabaster DePlume	04/19/2023 at 10:06 AM (CST)	

```
{
  "ts": "2023-04-19T15:10:06Z",
  "username": "arthursbb",
  "platform": "osx",
  "ms_played": 3882,
  "conn_country": "US",
  "ip_addr_decrypted": "98.206.160.59",
  "user_agent_decrypted": "unknown",
  "master_metadata_track_name": "Salty Road Dogs Victory Anthem",
  "master_metadata_album_artist_name": "Alabaster DePlume",
  "master_metadata_album_album_name": "Salty Road Dogs Victory Anthem",
  "spotify_track_uri": "spotify:track:1wNz8Jnby57eQMTThNoMDB4",
  "episode_name": null,
  "episode_show_name": null,
  "spotify_episode_uri": null,
  "reason_start": "clickrow",
  "reason_end": "remote",
  "shuffle": false,
  "skipped": false,
  "offline": false,
  "offline_timestamp": null,
  "incognito_mode": false
},
```

2. Searching and filtering

▼ RIVERDANCE			
▼ Midnight Sun	Nilüfer Yanya	04/21/2023 at 3:11 PM (CST)	

Search...

Track	Album artist	Track start time	+
▼ I Got the News	Steely Dan	04/19/2023 at 9:52 AM (CST)	✕
▼ Midnight Sun	Nilüfer Yanya	04/19/2023 at 10:01 AM (CST)	✕
▲ Salty Road Dogs Victory Anthem	Alabaster DePlume	04/19/2023 at 10:06 AM (CST)	✕

```
{  
  "ts": "2023-04-19T15:10:06Z",  
  "username": "arthursbb",  
  "platform": "osx",  
  "ms_played": 3882,  
  "conn_country": "US",  
  "ip_addr_decrypted": "98.206.160.59",  
  "user_agent_decrypted": "unknown",  
  "master_metadata_track_name": "Salty Road Dogs Victory Anthem",  
  "master_metadata_album_artist_name": "Alabaster DePlume",  
  "master_metadata_album_album_name": "Salty Road Dogs Victory Anthem",  
  "spotify_track_uri": "spotify:track:1wNz8Jnby57eQMTThNoMDB4",  
  "episode_name": null,  
  "episode_show_name": null,  
  "spotify_episode_uri": null,  
  "reason_start": "clickrow",  
  "reason_end": "remote",  
  "shuffle": false,  
  "skipped": false,  
  "offline": false,  
  "offline_":  
  "incognit  
},
```

▼ RIVE			✕
▼ Midnight Sun	Nilüfer Yanya	04/21/2023 at 3:11 PM (CST)	✕

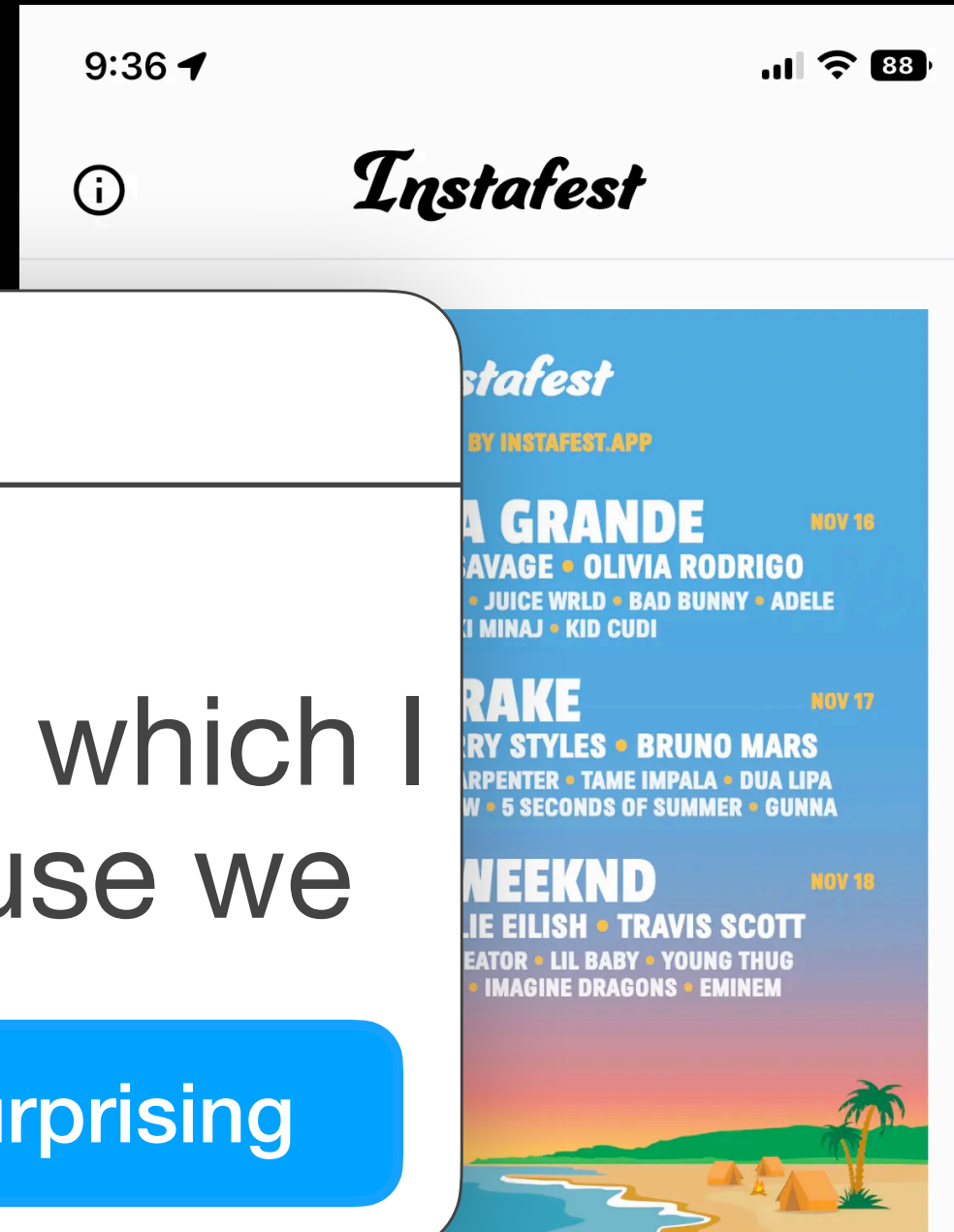
3. Data deletion and modification in-band

The Future of Data Exports

P27-FB

"I love... [that] I found a childhood friend of mine which I put as brother in FB 'cause we were very close."

surprising



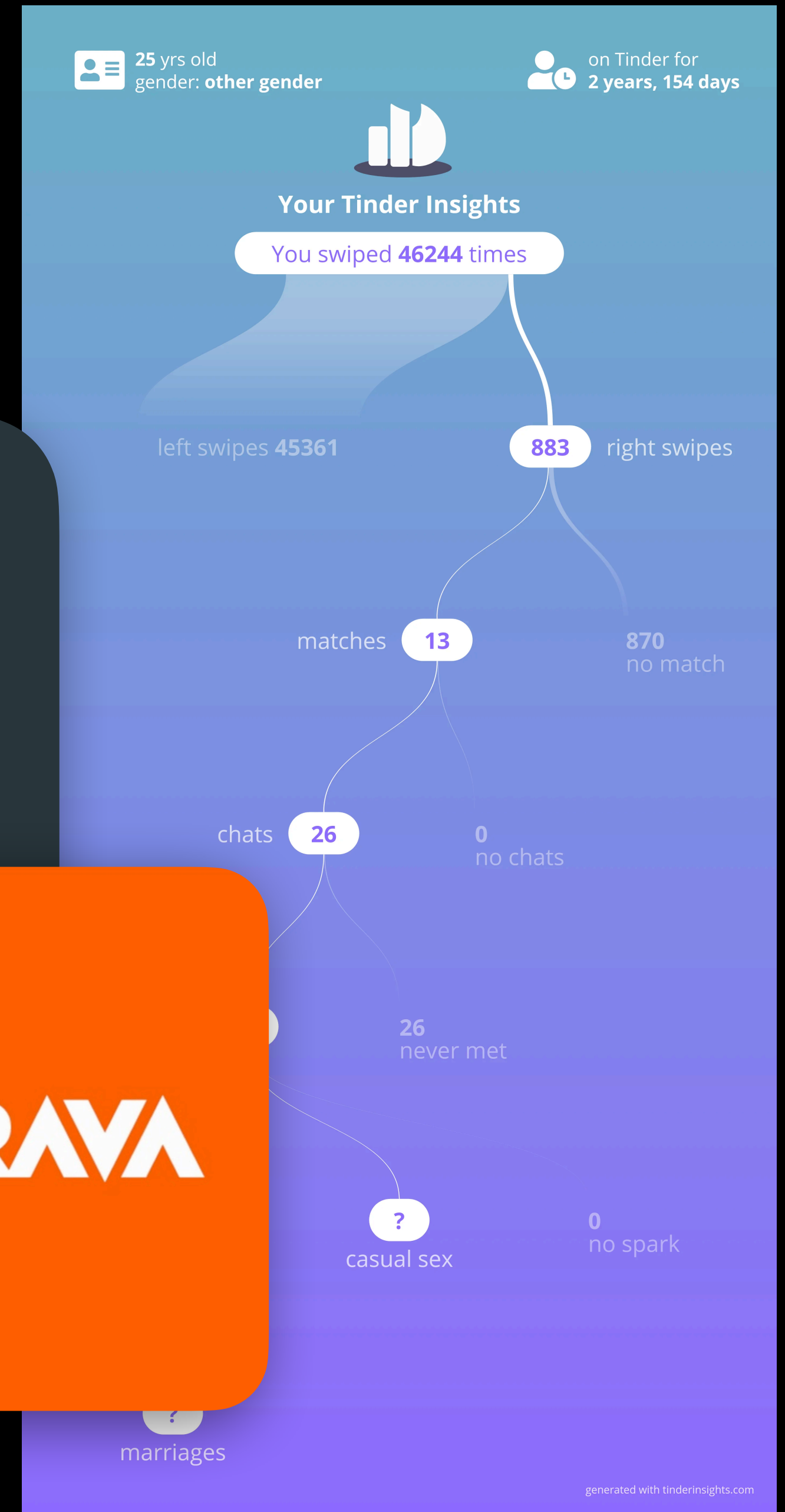
Create a festival lineup from your top artists.

Sign in to your Spotify account to get started.

Sign in with Spotify



bel



Data Subjects' Reactions to Exercising Their Right of Access

Users want to know about:

1. Platform practices and policies
2. Types of records tracked and stored
3. High-level takeaways and patterns

Key data export features:

1. Definitions and explanations in-band.
2. Searching and filtering
3. Data deletion/modification in-band
4. Rich and meaningful interactions

Arthur Borem

Co-authors: Elleen Pan, Olufunmilola Obielodan, Aurelie Roubinowitz, Luca Dovichi, Michelle L. Mazurek, and Blase Ur.

