

UNIVERSITY OF OSLO



Past and Present: A Case Study of Twitter's Responses to GDPR Data Requests

Daniela Pöhn
daniela.poehn@unibw.de

Nils Gruschka
nilsgrus@ifi.uio.no

Annual Privacy Forum 2023, Lyon, France



Motivation

Data Subject Rights in the GDPR

Chapter 3

Rights of the data subject

Section 1 – Transparency and modalities

Article 12 – Transparent information, communication and modalities for the exercise of the rights of the data subject

Section 2 – Information and access to personal data

Article 13 – Information to be provided where personal data are collected from the data subject

Article 14 – Information to be provided where personal data have not been obtained from the data subject

Article 15 – Right of access by the data subject

Section 3 – Rectification and erasure

Article 16 – Right to rectification

Article 17 – Right to erasure ('right to be forgotten')

Article 18 – Right to restriction of processing

Article 19 – Notification obligation regarding rectification or erasure of personal data or restriction of processing

Article 20 – Right to data portability

Art. 15 GDPR

Right of access by the data subject

1. The data subject shall have the right to obtain from the controller confirmation as to whether or not personal data concerning him or her are being processed, and, where that is the case, access to the personal data and the following information:
 - (a) the purposes of the processing;
 - (b) the categories of personal data concerned;
 - (c) the recipients or categories of recipient to whom the personal data have been or will be disclosed, in particular recipients in third countries or international organisations;
 - (d) where possible, the envisaged period for which the personal data will be stored, or, if not possible, the criteria used to determine that period;

Subject Access Requests

Many well-known Issues (partly historic)

- Poor usability of request interface
- Excessive identity check
- Long processing time
- Denial of access
- Large information size
- Information hard to understand

Twitter faces GDPR probe for refusing to comply with subject access request

By Keumars Afifi-Sabet published October 17, 2018

Academic's request for information about how the platform tracks him denied as it would take 'disproportionate effort'



I WANT YOU BACK: GETTING MY PERSONAL DATA FROM AMAZON WAS WEEKS OF CONFUSION AND TEDIUUM

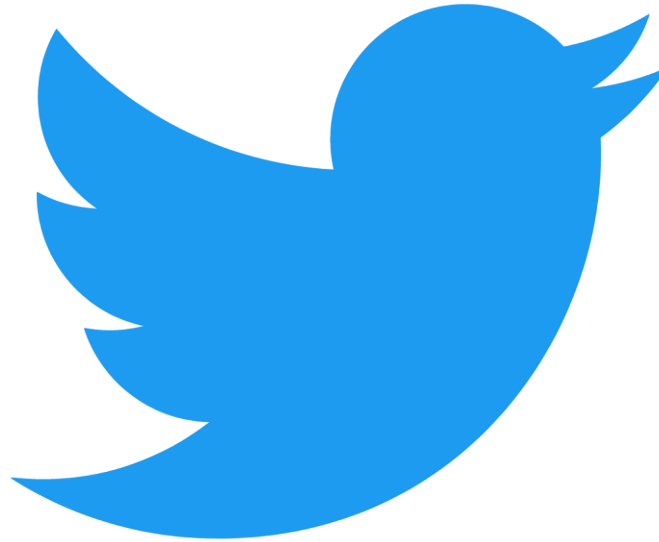
I asked Amazon to provide the data it had collected on me. The process was a labyrinthine endurance test.

Nikita Mazurov

March 27 2022, 7:00 a.m.

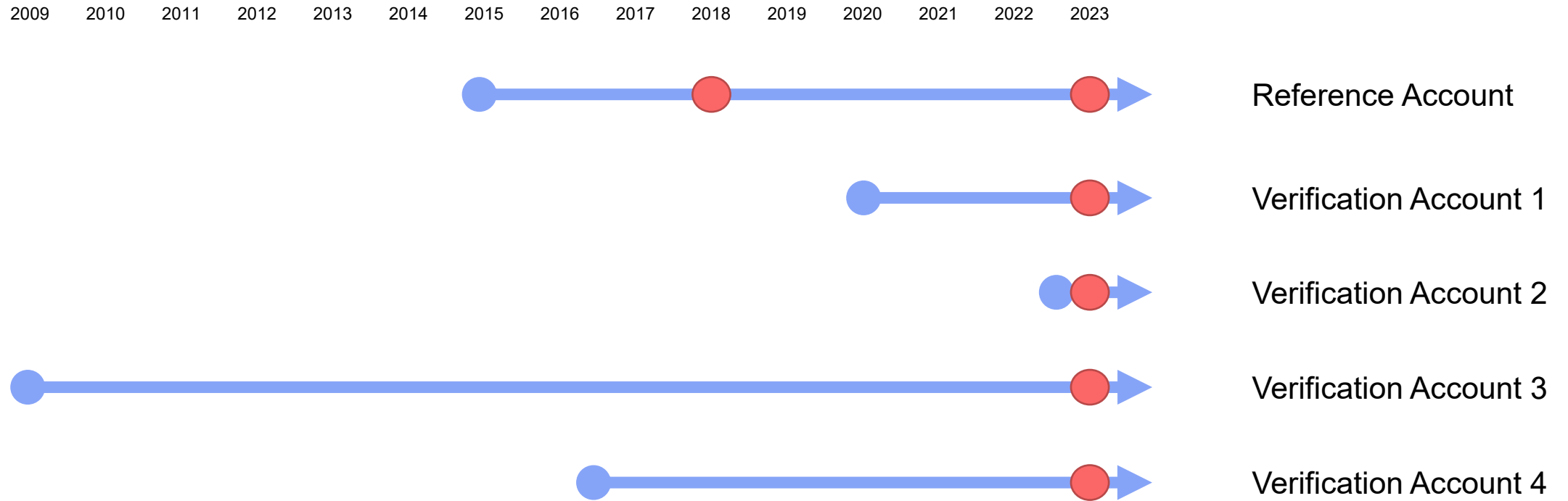
Has the situation improved?

5 years after the GDPR has become enforceable



Methodology

Twitter Accounts used in the study



Methodology

Analysis Criteria

- Compliance with the GDPR:
 - Accuracy (Art. 5): accurate and up to date
 - Format of personal data (Art. 12) : easily readable and accessible
 - Structured format (Art. 20): machine-readable format
 - Data minimization (Art. 5): storage duration, purpose
 - Timeliness (Art. 12)
- Compliance with Twitter's privacy statement

Request your Data from Twitter

Settings

Q Search Settings

Your account >

Monetization >

Twitter Blue >

Security and account access >

Privacy and safety >


Notifications >


Accessibility, display, and languages >


Additional resources >


Your Account


See information about your account, download an archive of your data, or learn about your account deactivation options

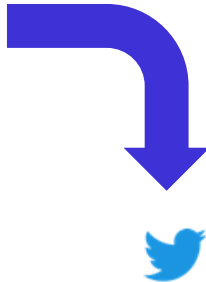

 Account information
See your account information I

 Change your password
Change your password at any t

 Download an archive of yo
Get insights into the type of inf

 TweetDeck Teams
Invite anyone to Tweet from th
TweetDeck.

 Deactivate your account
Find out how you can deactiva




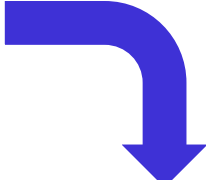
Hi Nils Gruschka,

Your Twitter archive is ready for you to [download](#) and view using your desktop browser. Make sure you download it before Feb 15, 2023, 9:10:53 AM.

If you didn't request this information, follow [these steps](#) to secure your account.

Thanks,

Twitter



UNIVERSITY
OF OSLO

Image source: <https://www.flaticon.com/free-icons/files-and-folders>
<https://www.flaticon.com/free-icons/clock>

Page 7

“The Past”

First Request from 2018




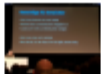
















- Collection of JSON files
 - Machine readable
 - Hard to understand for users
- Accuracy of data
 - Time zone incorrect
 - Age: 13 – 54, > 65
- Data minimization
 - previous email address (was changed several month before)
 - IP address during account creation (was created 3 years before)

```
{  
  "accountTimezone" : {  
    "accountId" : "$id",  
    "timeZone" : "Pacific Time (US & Canada)"  
  }  
}
```


“The Past”

First Request from 2018

- Includes images used in Tweets

				
65142764955072 9217- CQpV_PFUwAEtUj_ .jpg	68963852691321 6512- CZIWkmzWAAEGL My.jpg	90720364400891 9040- DIcv2lfUIAA4Fbg.j pg	94678888495185 1009- DSOIEZcXkAEdsUV .jpg	95443936750179 9425- DTBbolJVoAAZ7W N.jpg
				
95443936750179 9425- DTBbolOUMAApH Ny.jpg	95443936750179 9425- DTBbomLUMAEH nOr.jpg	95443936750179 9425- DTBbomMUMAAH Dil.jpg	96956045769774 6945- DXC8WLeXcAIS4j M.jpg	97139653832391 4752- DXIC1SjUMAM93e C.jpg
				
97382053058222 4896-DYK- CBTVQAIJ34-.jpg	98524524899253 0433- DavJN7oX4AA4o7 V.jpg	98524524899253 0433- DavJUEYW4AAaN Ox.png	10004785628000 21506- Dd9WfRVU0AADH md.jpg	10188335354934 59968-DhzUYY- WsAENGXt.jpg
				
10188335902207 22176- DhupQ6jWkAAG6f x.jpg	10240379485499 35104-DjG9s- GW0AA9yX3.jpg	10290562339642 98241- DkfHRWqXcAETjho .jpg	10325205287063 30625- Dk_U7cGW0AIUc8 X.jpg	10340935442885 42720- Dlc3Z54U0AAxKL O.jpg

“The Present”

Second Request in 2023

- Information inside JavaScript files
- Rendered to HTML file → dashboard
- From the README.txt:
 - Also note that the HTML renderer only includes a subset of the data included in the archive. To see all the data included in the archive, please navigate the JSON files located in the “data” folder.



Hi @ [redacted]

Here is the information from your archive which may be most useful to you.

As this information is not all the data from your archive, please open [this folder](#) if you want to see all the data that we have included. An explanation for each piece of data can be found in the [README](#) file included in the same folder.



Quick stats

Here's a glance at some numbers from your archive:

Tweets 357 Including edited versions	Likes 1,052
Blocked accounts 0	Muted accounts 1
Lists 1	Moments 0

Twitter's Privacy Center

You should always know what data Twitter collects from you and how it's used.

[Learn more](#)

Your privacy options

You have a wide range of privacy settings to tailor your experience on Twitter in a way that makes you the most comfortable.

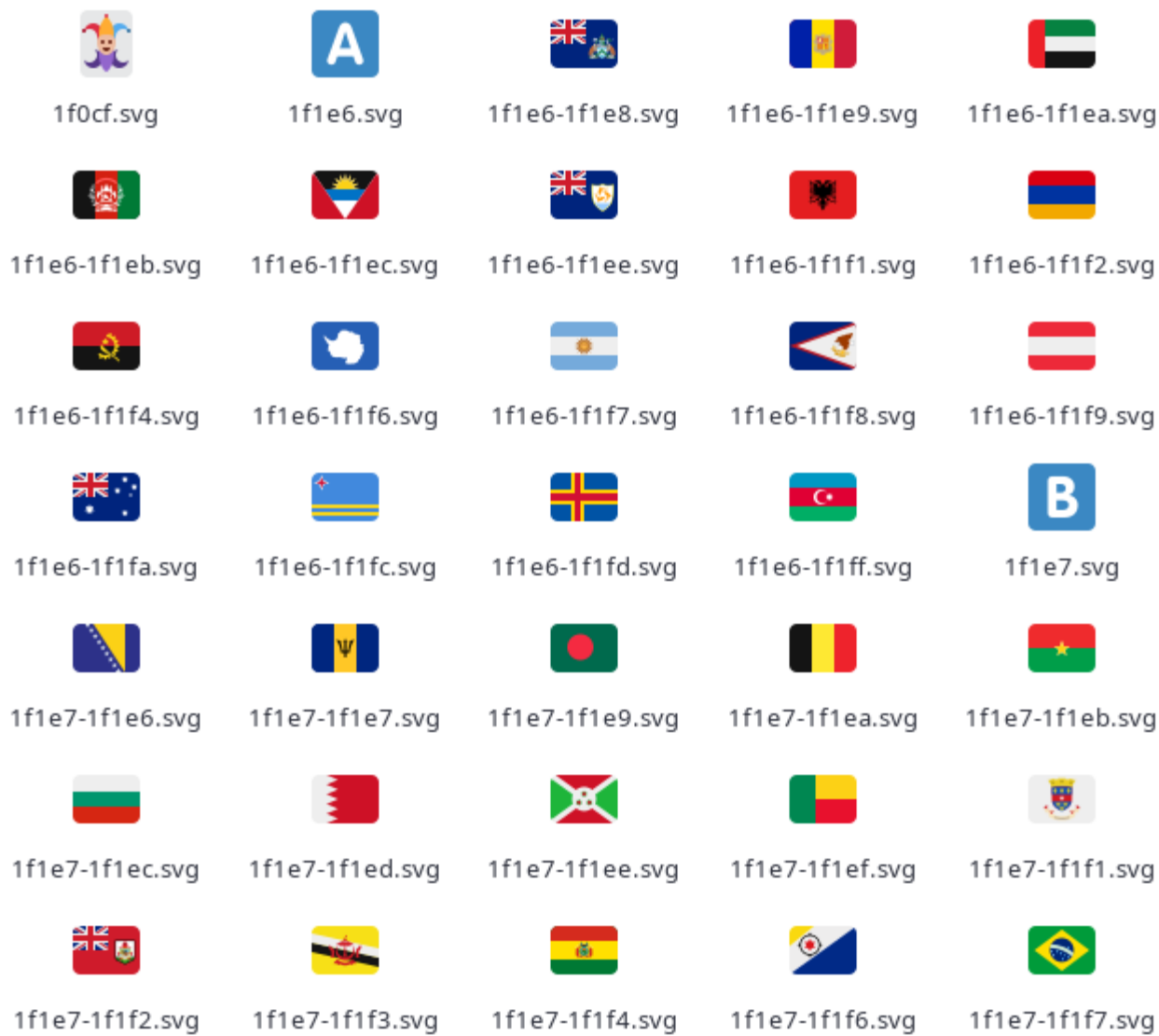
[Learn more](#)

```
window.YTD.account_timezone.part0 = [
  {
    "accountTimezone" : {
      "accountId" : "$id$",
      "timeZone" : "Pacific Time (US & Canada)"
    }
  }
]
```

“The Present”

Second Request in 2023

- In addition to own media files:
- 3000 standard emojis are included (as PNG and SVG)



“The Present”

Second Request in 2023

- Data minimization

- previous email address (was changed several years before)
- IP address during account creation (was created 8 years before)
- README.txt states storage duration for **some** data types, but not all

- We keep your profile information and content for the duration of your account.
- We generally keep other personally identifiable data we collect when you use our products and services for a maximum of 18 months.

 **Privacy Policy**

“The Present”

Second Request in 2023

- Accuracy
 - Time zone incorrect
 - Age range correct

Comparison with Verification Accounts

- Accuracy:
 - V1: wrong time zone
 - V2: no time zone information
 - V3: correct time zone
 - V4: no time zone information
- V1: gender incorrect (guessed by Twitter)

Comparison

Past vs. Present

	2018	2023
Accuracy	?	?
Human readable	—	+
Machine readable	+	?
Data minimization	—	—
Timeliness	+	+

Advertisement and Tracking

DraperHero @HeroDraper · January 22, 2023 · 7:41 PM

🔥 Congrats [#Germany](#), you ranked **10** for supporting [#entrepreneurs](#), [#innovation](#) & [#tech](#) startups - let's keep rising to the top! How did your country rank in the Global Draper Innovation Index? EXPLORE: <https://t.co/VewzCcOtR2> [#BeYourOwnHero](#) <https://t.co/2zNhhhFkBt>

[View ad on Twitter](#)

▼ Hide details

Age 21 and up

Locations Munich

Candy Crush Saga @CandyCrushSaga · January 16, 2023 · 3:01 PM

Can you complete all the moves?

[View ad on Twitter](#)

▼ Hide details

Age 18 and up



List 5568 (Device Id)

Locations Germany

OS versions Android Marshmallow and above

Platforms Android

Wirtschaftskammer Österreich @WKOe · August 28, 2022 · 3:58 PM

🚩 Schadenersatzforderung wegen [#GoogleFonts](#), was tun? Ist dein Unternehmen auch von einem Abmahnungsbrief betroffen? Im Webinar wird unsere Expertin deine Fragen beantworten. Jetzt kostenlos anmelden: <https://t.co/DaaZvojHkI>   Mo., 29. August, 15:00 – 16:00 Uhr <https://t.co/YZx552WpSO>

[View ad on Twitter](#)

▼ Hide details

Keywords innovation

Locations Austria

OG CS:GO @OGcsgo · November 13, 2022 · 6:03 PM

Be part of the team. Follow [@OGcsgo](#). <https://t.co/bOJ64keOlf>

[View ad on Twitter](#)

▼ Hide details

Advertisement and Tracking

- Some ads were selected based to the location (= city)
 - Location was never specified
 - Twitter has derived location obviously from geolocation
 - This is true even for temporary locations
- Information about used device is used
- Age is used for advertisement, but not always comprehensible
 - Age info (in data export): 13 – 54
 - Ad ages: 21 and up / 18 and up
- Sometimes no explanation given

Twitter's Privacy Statement

Comparison with data export

	Included in Data Export
Personal data (display name, email address, etc.)	x
Authentication information	-
Usage Information (e.g., tweets)	x
Device Information	(x)
Location Information	(x)
Inferred Identity	?
Advertisement	(x)
Cookies and similar technologies	-
Twitter's partners / Third parties	-

Conclusion

What have we learned?

- Process of requesting data:
 - Usability acceptable (possibly except ZIP handling)
 - no further identification required
- Changes from 2018 to 2023:
 - Only few changes regarding the amount/accuracy of data
 - Different data format/presentation: highly improved human readability, reduced machine readability
- Completeness of data:
 - Not all data included in the export
 - Source of data not always stated (directly from user, derived, how derived)
- Future research required for more detailed analysis