

# GDPR COMPLIANCE FOR YOUR DATASTORE

EMANUIL TOLEV

@EMANUIL\_TOLEV

**ALSO KNOWN AS "NOT  
A GDPR EXPERT"  
I'M GOOD AT MAKING MOUSSAKA AND BEAN  
SOUP THOUGH**

**IT'S A CULTURAL  
ARTEFACT NOW**

# JOKE CREDIT @WARDROX

<https://twitter.com/wardrox/status/988363811479572483>

# QUESTIONS IN CHAT :)

# **GENERAL DATA PROTECTION REGULATION**

**ADOPTED 2016/04/14**

**ENFORCEABLE 2018/05/25**

**WHERE & WHO?**

**EU ORGANIZATIONS**

**SERVICES OR GOODS FOR /  
MONITORING OF EU CITIZENS**

# **FINES**

## **2 TIERS:**

**UP TO 10M EUR OR 2% OF TURNOVER**

**UP TO 20M EUR OR 4% OF TURNOVER**

# OF TURNOVER S'UP IN THE UK?

EQUIFAX (500K - OLD DPA LAW), BA (JUL  
2019), MARIOTT (JUL 2019)

CROWN PROSECUTION SERVICE

GUESS THE AMOUNT FACEBOOK WAS FINED  
FOR CAMBRIDGE ANALYTICA!

# WHAT?

## PERSONAL DATA

**ANY INFORMATION RELATING TO AN IDENTIFIED OR IDENTIFIABLE NATURAL PERSON**

**RIGHTS?**

**TO BE INFORMED**

**ACCESS**

**RECTIFICATION**

**RIGHTS?**

**ERASURE (TO BE FORGOTTEN)**

**RESTRICT PROCESSING**

**DATA PORTABILITY**

**RIGHTS?**

**OBJECT**

**AUTOMATIC DECISION MAKING**

**LAWFUL USE OF DATA?**

**INFORMED CONSENT**

**CONTRACTUAL OBLIGATION**

**LEGITIMATE INTEREST**

**LAWFUL USE OF DATA?**

**LEGAL OBLIGATION**

**VITAL INTERESTS**

**PUBLIC TASK**

**PROOF REQUIRED**

**RIGHT TO COLLECT AND  
LEGALLY USE**

**DISCLOSURE**

**WITHIN 72 HOURS TO A  
MEMBER STATE'S  
"SUPERVISORY BODY"**

# LEGACY DATA

**STOP,  
CHECK,  
DELETE**

**WHAT IF NO LEGAL  
GROUNDS?**

# 1. STOP YOUR SERVICE

Unfortunately, our website is currently unavailable in most European countries. We are engaged on the issue and committed to looking at options that support our full range of digital offerings to the EU market. We continue to identify technical compliance solutions that will provide all readers with our award-winning journalism.



The EU is implementing new data privacy rules, known as General Data Protection Regulation (GDPR). While we fully support and are working diligently toward meeting all GDPR requirements, we have determined that we will not complete this effort by the regulation's start date later this month. As a result, **we will temporarily stop providing our service to EU customers, and we will stop providing service to all EU residents on May 23.**

**For all customers outside the EU and the European Economic Area, nothing will change and you will be able to continue using Unroll.Me without issue.**

For our customers in the EU and in the European Economic Area, the Unroll.Me team is committed to re-introducing our service as **quickly as possible** so please stay tuned for updates.

To all our customers everywhere, Unroll.Me is a completely secure service and our users' privacy is of paramount concern. **Your personal data has always been secure with us.**

If you have any questions or concerns about this topic, please [reach out to us](#).

Find more information in our [FAQ](#).

Do you live in the EU and in the European Economic Area?

Yes

No

# 2. DROWN THEM IN FORMS

[HTTPS://TWITTER.COM/RIANJOHNSON/STATUS/999730569641525248](https://twitter.com/RIANJOHNSON/STATUS/999730569641525248)

*Episode VIII*

## *THE LAST JEDI*

*We have updated our GLOBAL  
PRIVACY TERMS. Your trust is  
important to us. As part of our  
ongoing commitment to  
transparency, and in preparation*

# 3. PSEUDONYMIZATION

**ANONYMOUS**

**NO INFORMATION THAT COULD  
POTENTIALLY IDENTIFY AN  
INDIVIDUAL**

**NOT CONSIDERED PERSONAL DATA BY GDPR**

**PSEUDONYMOUS**

**RE-IDENTIFICATION POSSIBLE  
IF COMBINED WITH  
ADDITIONAL INFORMATION**

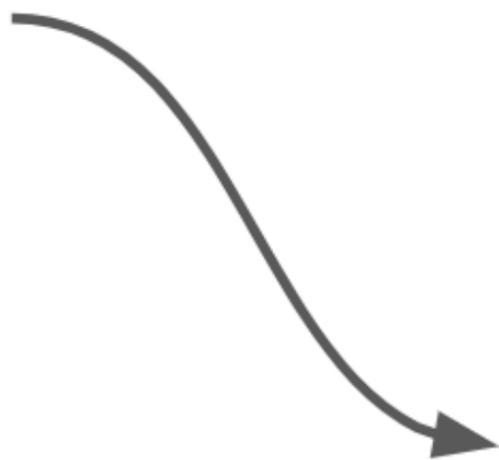
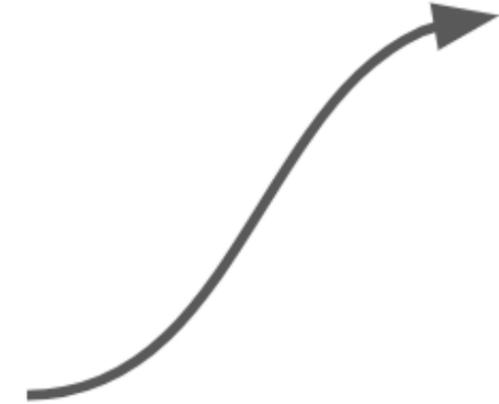
**WITHOUT THIS INFORMATION, RE-  
IDENTIFICATION PRACTICALLY IMPOSSIBLE**

# WHEN?

## INGESTION TIME

## SEARCH TIME

```
{
  "ip": "176.45.67.123",
  "username": "kimchy"
}
```



### Pseudonymized Index

```
{
  "ip": "241c84090bb58559cb0f5f195dbd0138d4ce613fd8b5b95c71d3cb0a017e44f3",
  "username": "1f63b3785c70e9acb0b3841a78a399bb898d4596688f8d3a07f9873788f2d127"
}
```



### Identity Store

```
{
  "_id",
  "241c84090bb58559cb0f5f195dbd0138d4ce613fd8b5b5c71d3cb0a017e44f3"
  "Key": "241c84090bb58559cb0f5f195dbd0138d4ce613fd8b5b95c71d3cb0a017e44f3",
  "value": "176.45.67.123"
}
```

```
{
  "_id",
  "1f63b3785c70e9acb0b3841a78a399bb898d4596688f8d3a07f9873788f2d127"
  "Key": "1f63b3785c70e9acb0b3841a78a399bb898d4596688f8d3a07f9873788f2d127",
  "value": "kimchy"
}
```

```
fingerprint {
  method => "SHA256"
  source => ["ip"]
  key => "${FINGERPRINT_KEY}"
}

mutate {
  add_field => {
    '[identities][0][key]' => "%{fingerprint}"
    '[identities][0][value]' => "%{ip}"
  }
}

mutate {
  replace => {
    "ip" => "%{fingerprint}"
  }
}
```

## Data returned for an Email Append

<b>Input (Encrypted Email)</b>	<b>Recovered Email</b>	<b>First Name</b>	<b>Last Name</b>	<b>Address</b>	<b>City</b>	<b>State</b>	<b>Zip</b>	<b>Phone</b>
cbf05329de4e57e4cba09471448ddb98	joe.smith@gmail.com							
5469703a9c26d5e8be4e46bef4596e2f836088c0	commonme@yahoo.com	Don	Johnson	478 19TH PL W	Redmond	WA	98052	4255557892

# ACCESS CONTROL & ENCRYPTION



**Colin Percival**

@cperciva

Follow



Reminder: If your data is encrypted with someone else's keys, it might as well not be encrypted at all. It's hard to imagine any attack which DynamoDB's internal encryption-at-rest defends against.



**DynamoDB** @dynamodb

All customer data on Amazon DynamoDB is now encrypted at rest!  
[amzn.to/2TgJEE8](https://amzn.to/2TgJEE8)

10:03 PM - 15 Nov 2018

# DELETION

**“INTERESTING #GDPR SOLUTION FOR THE "RIGHT TO ERASURE": ENCRYPT ALL USER'S DATA AND WHEN YOU HAVE TO DELETE IT YOU JUST GET RID OF THE PRIVATE KEY.**

**WILL THIS BECOME THE NORM?”**

<https://twitter.com/Stephan007/status/985103374118014976>

**“[...] PERSONAL DATA OF OUR USERS CAN ONLY BE PERSISTED WHEN IT IS ENCRYPTED. EACH USER HAS THEIR OWN SET OF KEYS**

**[...] IT REDUCES THE IMPACT OF LEAKING A DATASET, SINCE THE DATASET BY ITSELF IS USELESS – ATTACKERS ALSO NEED THE DECRYPTION KEYS.**

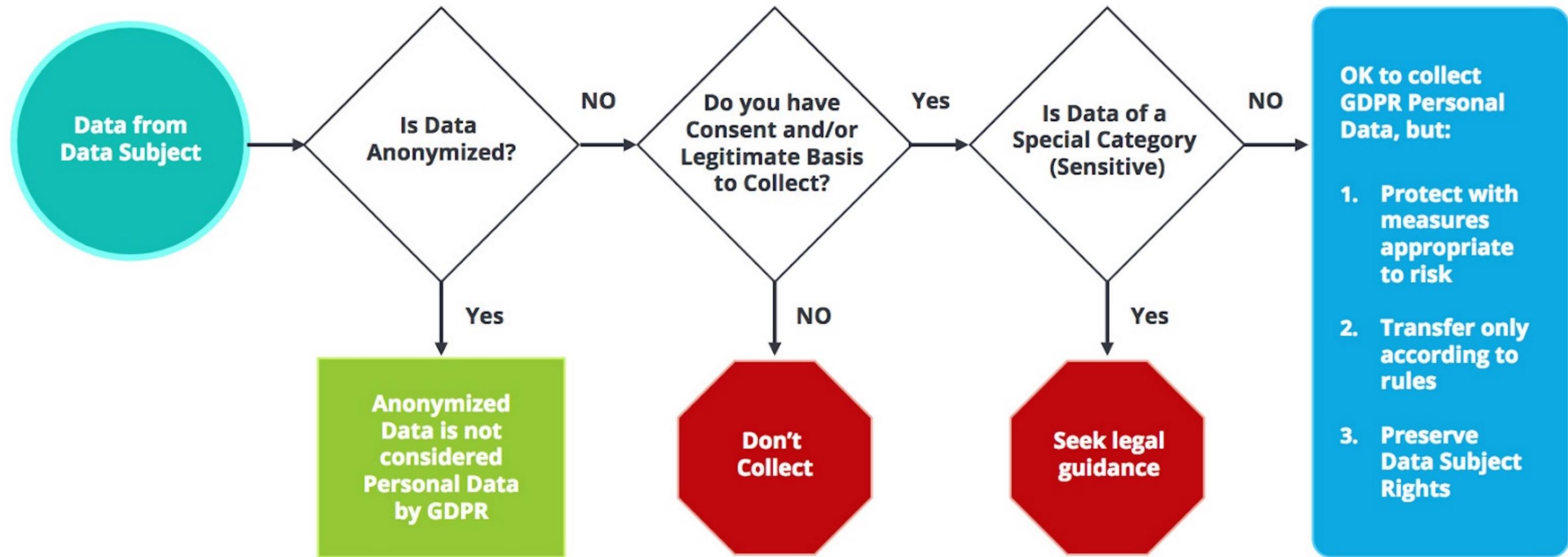
**[...] IT ALLOWS US TO CONTROL THE LIFECYCLE OF DATA FOR INDIVIDUAL USERS CENTRALLY.”**

<https://labs.spotify.com/2018/09/18/scalable-user-privacy/>

# CONCLUSION

# DATA PROTECTION

# THE NEW STANDARD AND NORM OF APPROACHING PERSONAL DATA



**I AM NOT A LAWYER**

# AS A DEV AGENCY / CONSULTANCY

# HEATHER BURNS

<https://www.smashingmagazine.com/2018/02/gdpr-for-web-developers/>



**G D P R**

**A N D C A R R Y O N**



Hi there,

At Zoom, we empower your team by delivering you up-to-date, actionable news on our features and resources. With GDPR fast approaching, **please opt-in** below to continue to receive communications such as:

- Industry reports and news
- First access to upcoming events
- Product how-to's and updates

If you do not **opt-in**, you will no longer receive these types of communications starting **May 25th**.

Please **opt-in now** to stay in touch with Zoom!

Yes, I'd like to opt-in!

Yes, but only email me 1x a month

**WHY CARE?  
STICK  
CARROT  
GODWIN**

# QUESTIONS?

**EMANUIL TOLEV**

**@EMANUIL\_TOLEV**