



# DWeb Shanghai 2nd Meetup

Co-hosted with

**X-Order Lab**

# Internet Health Report



# Internet Health Report

- Annual report recognizing impactful issues on the Internet
- Created and compiled by Mozilla Foundation
- Let users know how companies make profit or how our personal data is used
- Suggest what we can do next to fix the issue

# Topic: Privacy



<https://someguy.is/Privacy-Policy>



source: everywhere online

# What happened in the past few years?

- Famous Facebook–Cambridge Analytica data scandal
- Up to ~87m users were affected
- Influenced 2016 American president election, 2016 Brexit and 2018 Mexican general election
- An "issue", a “mistake”, a "breach of trust" but not a “data breach”



# What happened in the past few years?

- Equifax data breach
- ~145m users were affected in North America
- Highly sensitive personal data was leaked, including SSN, home address and credit card info
- A failure of secure implementation of their system



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# What happened in the past few years?

- WeChat Data Breach
- Over ~1 billion users are affected
- Over 300m Chinese private messages are exposed
- Governments are reported monitoring through both social media and instant messaging, not just in China
  - Tianyan Program
  - The Prism Project

**“The dominant business model and currency of today’s digital world is based on gathering and selling user data about us.”**

# Covered by the report

- Data privacy regulations in different countries
- Anonymity issues
- 23 reasons not to reveal your DNA
- Data tracking in mobile apps

# Data privacy regulations

- General Data Protection Regulation(GDPR)
- California Consumer Privacy Act(CCPA)

# General Data Protection Regulation

- Applied in all European Union countries
- Effective on May 25 2018
- Hundreds of millions of euro fines are already filed
- Only 27% of the companies are already GDPR compliant

# General Data Protection Regulation

- Protecting all EU citizens' personal data only
- Including all companies providing services to EU citizens
- Data processing requires data controller's permission
  - Collecting, compiling, storing
  - Modifying, indexing, querying
  - Restricting, deleting, destroying

# General Data Protection Regulation



# General Data Protection Regulation



## RIGHT TO BE INFORMED

Be transparent in how you collect and process personal information and the purposes that you intend to use it for. Inform your customer of their rights and how to carry them out.



## RIGHT OF ACCESS

Your customer has the right to access their data. You need to enable this either through business process or technical means.



## RIGHT TO RECTIFICATION

Your customer has the right to correct information that they believe is inaccurate.



## RIGHT TO ERASURE

You must provide your customer with the right to be forgotten, provided that your legitimate interest to hold such information does not override theirs.



## RIGHT TO RESTRICTION OF PROCESSING

Your customer has the right to request that you stop processing their data.



## RIGHT TO DATA PORTABILITY

You need to enable the machine and human-readable export of your customers' personal information.



## RIGHT TO OBJECT

Your customer has the right to object to you using their data.



## RIGHTS REGARDING AUTOMATED DECISION MAKING

Your customer has the right not to be subject to a decision based solely on automated processing, including profiling.

# General Data Protection Regulation

Organization	Amount	Reasons
Google LLC	€ 50 million	Insufficient transparency, control, and consent over the processing of personal data for the purposes of behavioural advertising.
British Airways	£183 million	Use of poor security arrangements that resulted in a 2018 web skimming attack affecting 500,000 consumers.
Marriott International	£99 million	Failure to undertake sufficient due diligence when acquiring Starwood hotels group, whose systems were compromised in 2014, exposing approximately 339 million guest records.

Source: [https://en.wikipedia.org/wiki/GDPR\\_fines\\_and\\_notices](https://en.wikipedia.org/wiki/GDPR_fines_and_notices)

# California Consumer Privacy Act

- Protecting all California and New York citizens
- Including all companies serving these citizens
- Less strict than GDPR
  - Excluding the companies with less than 25 million dollars revenue as well as no more than 50, 000 users
- More fines than GDPR
  - 100 - 700 dollars per user
  - At most 4% of the company's revenue

# California Consumer Privacy Act

- Effective Jan 1 2020
- Few companies are ready



# Anonymity Issues

- “Encryption should be banned”
- “Anonymous sites should be eradicated”

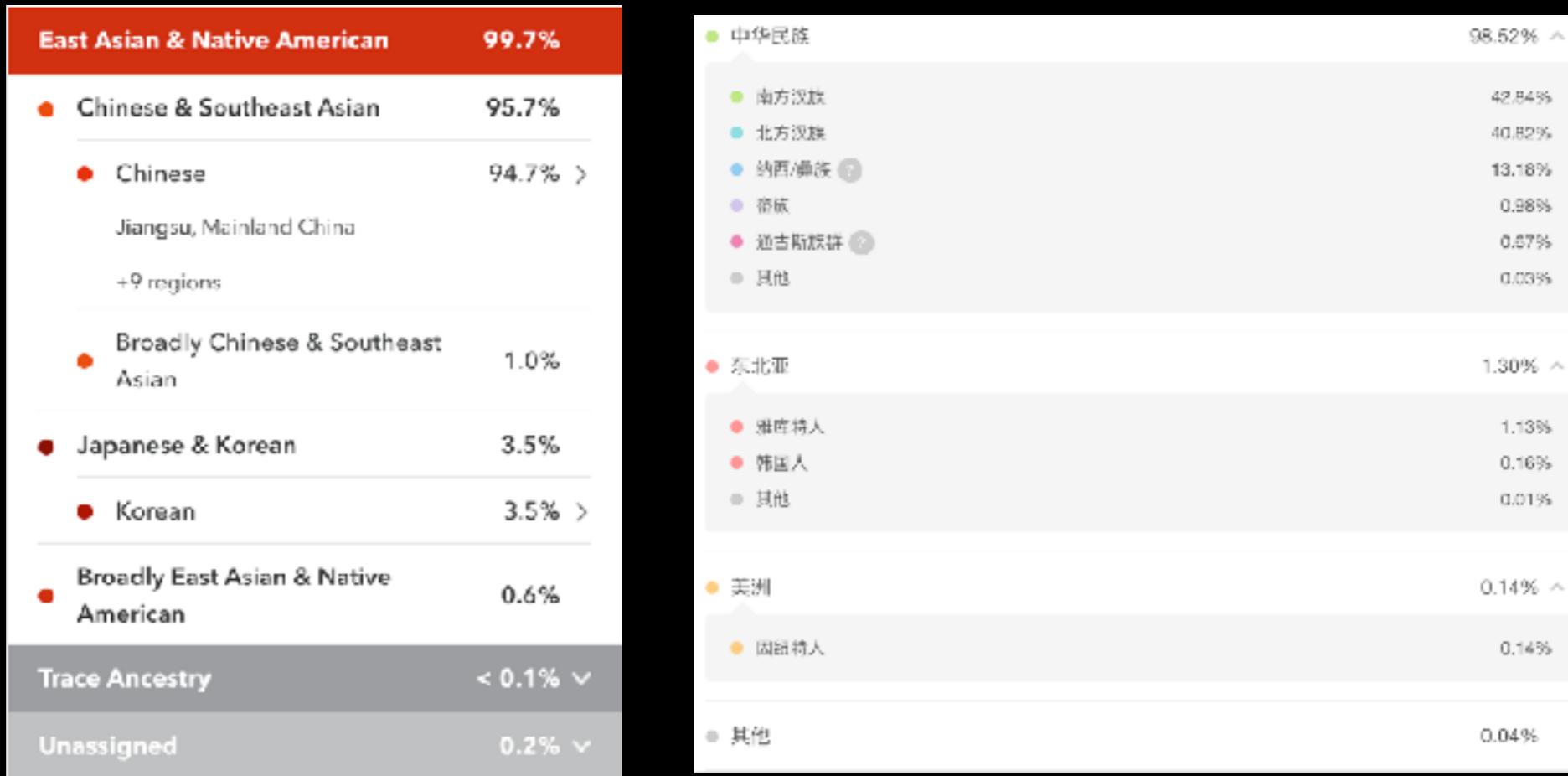


# Anonymity Issues

- Tor is the “Dark Web”
- Tor is always mentioned with criminals and terrorists
- ~2 million users per day use Tor to hide their traces
- Anonymity isn't the problem but our right

# 23 reasons not to reveal your DNA

- The results may not be accurate
  - Orig3n misidentified a dog's DNA as a human being
- Heritage tests are less precise if you don't have European roots



# 23 reasons not to reveal your DNA

- Your DNA says nothing about your culture
- Racists are weaponizing the results
- DNA tests can't be anonymous
- You will jeopardize the anonymity of family members
- You could become emotionally scarred
- Anonymous sperm and egg donors could become a thing of the past

# 23 reasons not to reveal your DNA

- Millions are spent on targeted ads to lure you
- A pair of socks is a better gift
- You will become the product
- Big pharma wants your DNA
- Companies can change their privacy policies
- A company (and your DNA) can change hands

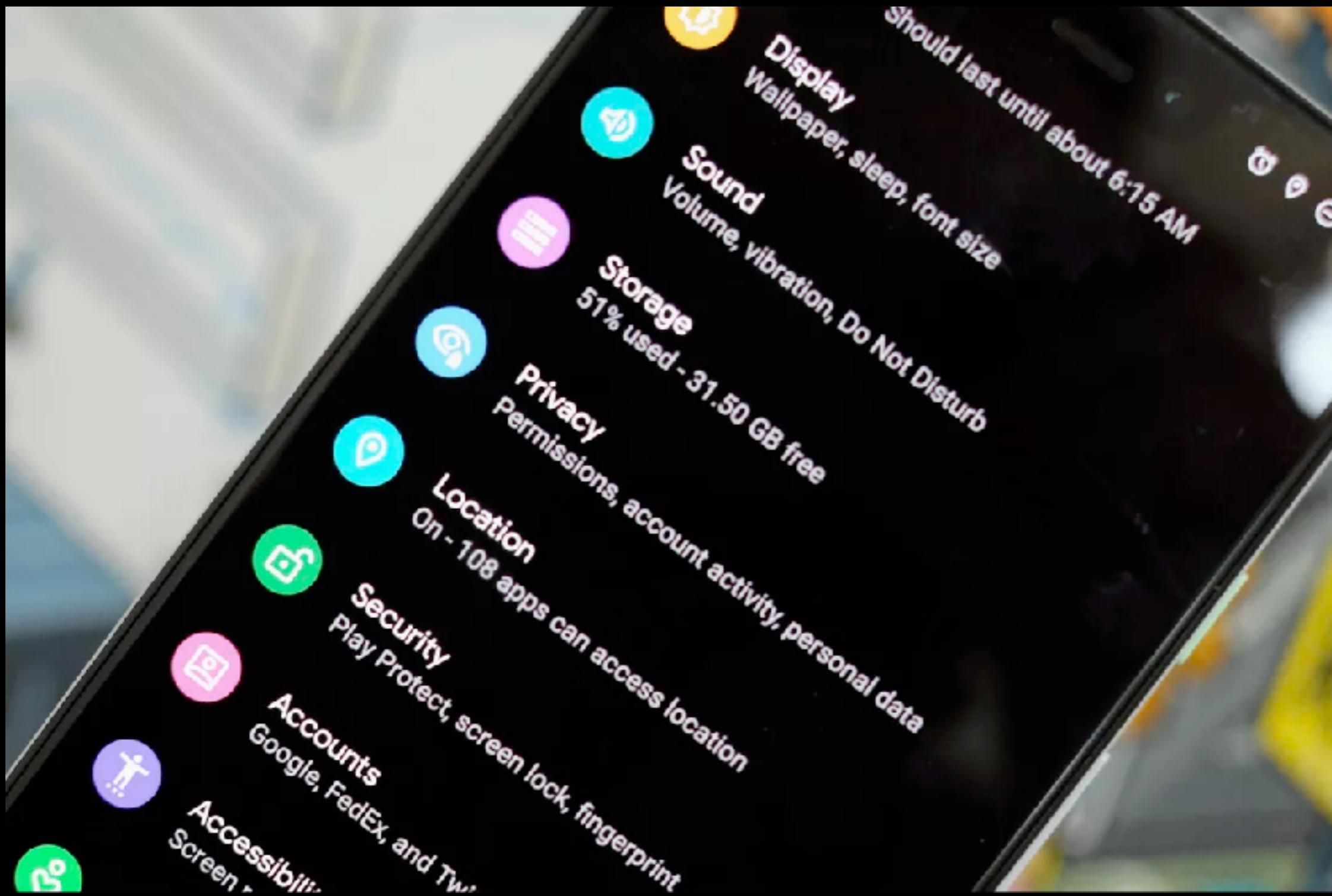
# 23 reasons not to reveal your DNA

- Destructing your DNA can be difficult
- You have no idea how long they will keep your sample
- Police can access your DNA
- Your results could become part of a global database
- Your data could be hacked, leaked or breached

# 23 reasons not to reveal your DNA

- Genes can be hacked
- You are signing away rights
- Companies profit from your DNA
- You may be discriminated against in the future

# Mobile app tracking





**Rich Rogers**  
@RichRogersIOT



**My wife asked me why I was speaking so softly at home.**

**I told her I was afraid Mark Zuckerberg was listening!**

**She laughed. I laughed.**

**Alexa laughed. Siri laughed.**

2:00 AM · Jun 2, 2019 · Twitter for iPhone

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**13.1K Retweets    48.6K Likes**

# Mobile app tracking

- You are sharing a lot to the apps on your phone
  - Contacts, location history, health data, fitness data
  - Double click, viewing duration, eye movement
- Majority Android apps contain utilities from companies
  - Alphabet, Facebook, Twitter, Verizon, Microsoft and Amazon

Knowing is half the  
battle

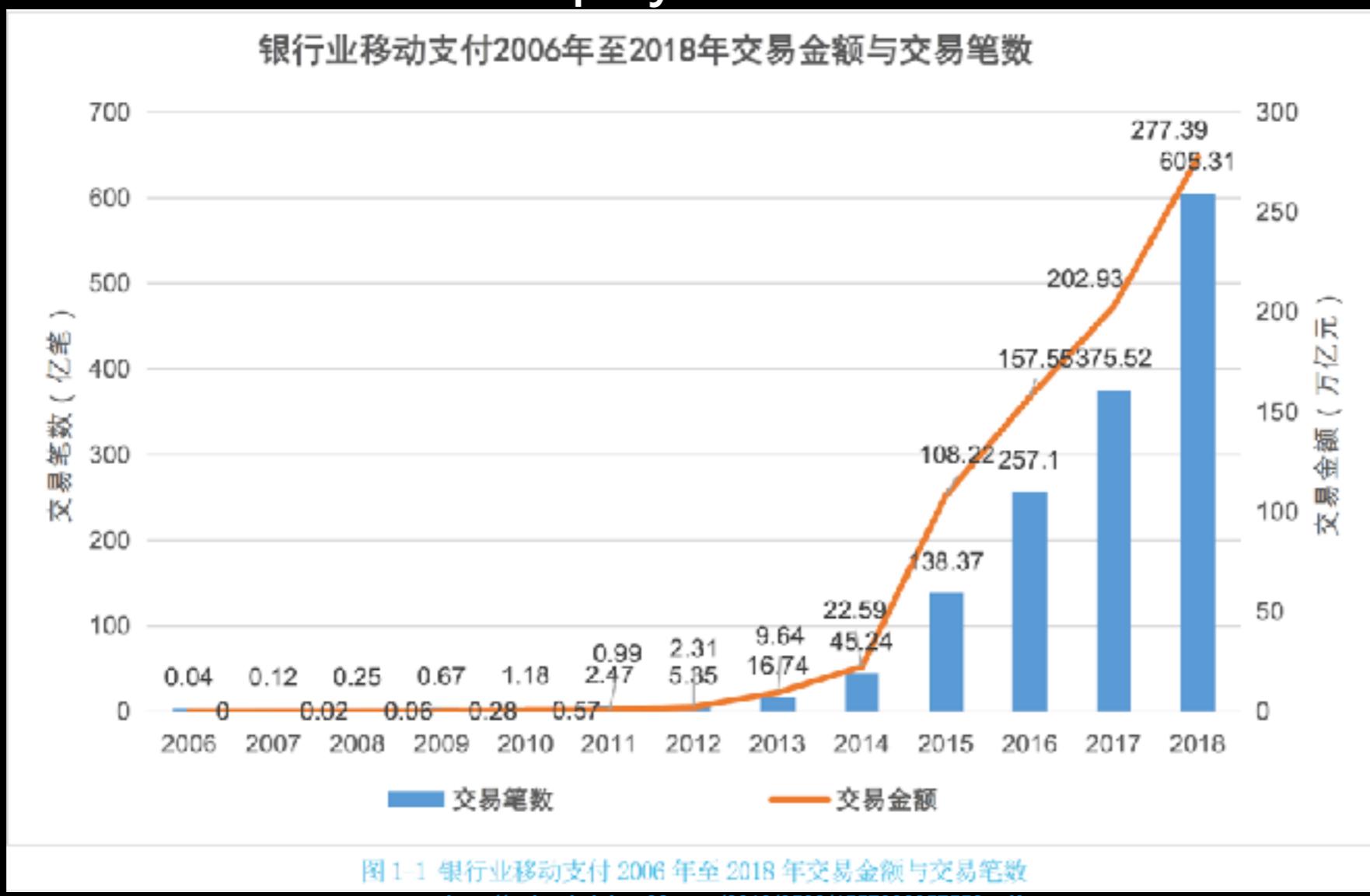
# What else

- Digital payment issues
  - Alipay and WeChat Pay are dominating in China



# What else

- Digital payment issues
  - ~890 millions mobile payment users in China



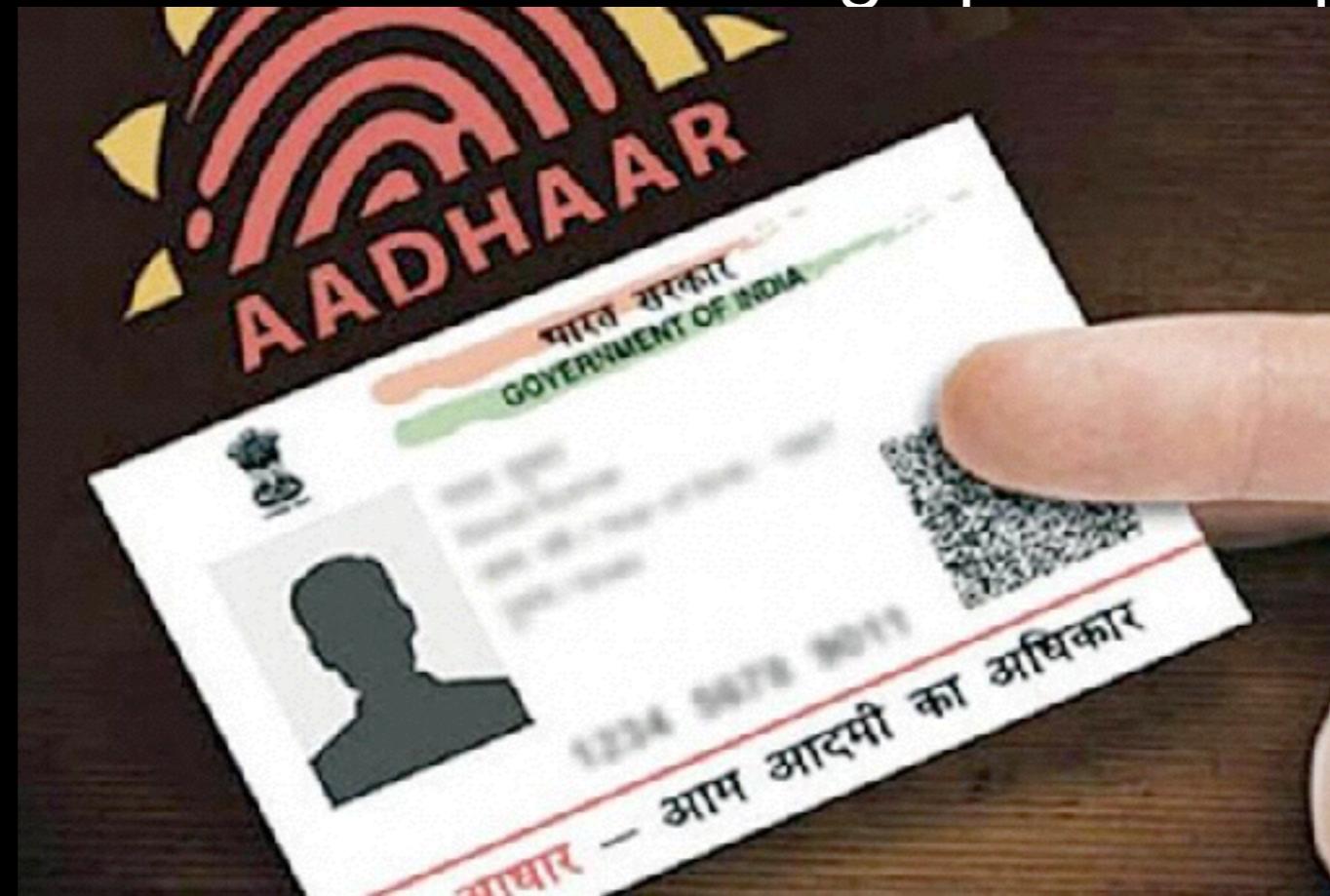
# What else

- Digital payment issues
  - Sweden is building a cashless society



# What else

- Aadhaar
  - Indian Digital Identity
  - Collects citizens' bio info - fingerprint and pupil data



# What else

- Aadhaar
  - Leaked 166,000 workers' data

The screenshot shows a web-based application for managing employee attendance. At the top, there are logos for the Government of Jharkhand and Aadhaar. Below the header, a navigation bar includes links for Home, Reports (which is the active tab), Employee, Dashboards, and Information. A search bar allows users to search for employees.

The main content area displays a photograph of an employee (RANA) and his personal details:

Name:	RANA
Designation:	Police
Department:	CM Secretariat
Mobile:	*****218
Location:	CM Secretariat
Unit:	Secretariat
Email:	[REDACTED]@gmail.com

A status message indicates "Status Verified: true". Below this, there are two tabs: "Graphical" (selected) and "Textual". The "Graphical" tab displays a grid where employees can be marked as Present (green), Absent (red), Holiday (blue), Leave (yellow), or Invalid/Future Date (black). The grid shows data for employees from 1 to 31, with RANA marked as Absent (red).

At the bottom of the page, a footer note reads: "© 2014 Government of Jharkhand. All rights reserved."

**What can we do?**