Privacy Issues in Practice – Part II

Introduction to Privacy and the GDPR

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IV. Privacy Risks of Social Networks – Social Network Analysis

The Stanford Daily

Skatteverket i Don Quijote-attack mot bloggare

Paul Ronge, 10 april 2010, 09:53 | visad 1 186 gånger | 24 kommentarer

Många verk och myndigheter tävlar säkert om titeln – men frågan är om inte

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Depressed over Faceb

Last Updated: Saturday, November 2

CBC News

Hacking and Social Networks

When people talk about hacking and social networks, they're not referring to the common definition of hacking, which is using malicious code or backdoors in computer networks to damage systems or steal proprietary information. Hacking into social networks requires very little technical skill. It's much more of a psychological game -- using information on personal profiles to win a complete stranger's trust.

This second type of hacking is called social engineering. Social engineering uses persuasive psychological techniques to exploit the weakest link in the information security system: people [source: SearchSecurity.com]. Examples of social engineering scams could be:

- Calling a systems administrator posing as an angry executive who forgot his password and needs to access his computer immediately.
- Posing as a bank employee and calling a customer to ask for his credit card number.
- Pretending to lose your key card and kindly asking an employee to let you into the office.

[sources: SecurityFocus and SearchSecurity.com]

When creating a profile page on a social network, many people fail to consider the possible security risks.

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https://computer.howstuffworks.com/internet/social-networking/information/how-online-social-networks-work2.htm

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Social Network Analysis/Profiling by:

- Employers

- Schools/Universities

- Tax authorities

- Law Enforcement

- Insurances

- Hackers

- .....

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New types of derived data

Private traits and attributes are predictable from digital records of human behavior

Michal Kosinski[a,1], David Stillwell[a], and Thore Graepel[b]

Author Affiliations ⌃

Abstract

We show that easily accessible digital records of behavior, Facebook Likes, can be used to automatically and accurately predict a range of highly sensitive personal attributes including: sexual orientation, ethnicity, religious and political views, personality traits, intelligence, happiness, use of addictive substances, parental separation, age, and gender. The analysis presented is based on a dataset of over 58,000 volunteers who provided their Facebook Likes, detailed demographic profiles, and the results of several psychometric tests. The proposed model uses dimensionality reduction for preprocessing the Likes data, which are then entered into logistic/linear regression to predict individual psychodemographic profiles from Likes. The model correctly discriminates between homosexual and heterosexual men in 88% of cases, African Americans and Caucasian Americans in 95% of cases, and between Democrat and Republican in 85% of cases. For the personality trait "Openness," prediction accuracy is close to the test–retest accuracy of a standard personality test. We give examples of associations between attributes and Likes and discuss implications for online personalization and privacy.

V. Privacy Risks & Challenges of Big Data

- The sheer scale of data collection, tracking, profiling & detail of the data, from many different sources

- Security of data

- Transparency

- Inaccuracy, discrimination, exclusion & economic imbalance

- Increased possibilities of government surveillance

(Art. 29 WP - Opinion 03/2013 on purpose limitation)

"Your recent Amazon purchases, Tweet score and location history makes you 23.5% welcome here."

Personal Discrimination in Online Ad Delivery

Source: Latanya Sweeney, https://arxiv.org/abs/1301.6822

Gender Discrimination

The New York Times

…..

Google's online advertising system, for instance, showed an ad for high-income jobs to men much more often than it showed the ad to women, a new study by Carnegie Mellon University researchers found.

(JULY 9, 2015)

Price Discrimination

THE WALL STREET JOURNAL.

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Google Pursuing a Return to China

Startups Dash Into Hot Data-Storage Sector

How to Buy a Xiaomi in Two Short Months
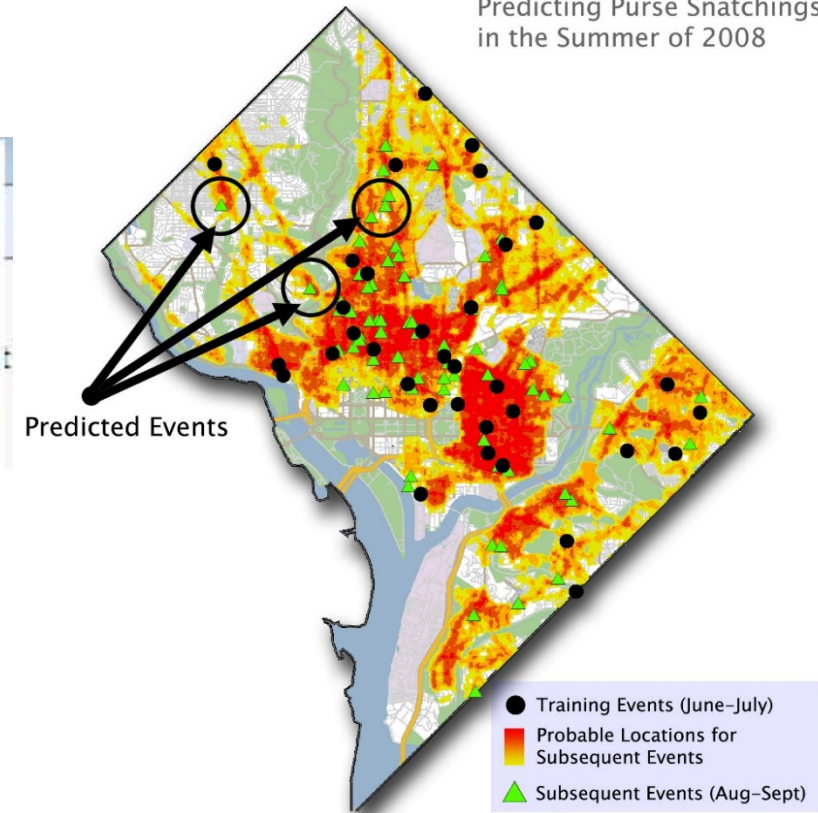
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Buy G
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TECH

On Orbitz, Mac Users Steered to Pricier Hotels

Predictive Policing

Forecasting Crime in Washington DC

Predicting Purse Snatchings in the Summer of 2008

Predicted Events

- ● Training Events (June–July)
- ■ Probable Locations for Subsequent Events
- ▲ Subsequent Events (Aug–Sept)

Police Follows Hollywood: Pre-Crime Has Become a Reality

Police departments across the world have found a new way to keep crime in check — algorithms to predict crime and criminals.

VI. Lack of control related to Cloud Computing
(Art. 29 WP Opinion 05/2012)

CRM Sales Management - SaaS

Business Intelligence Database - PaaS

Storage Computation - - PaaS

Backup Computation - PaaS
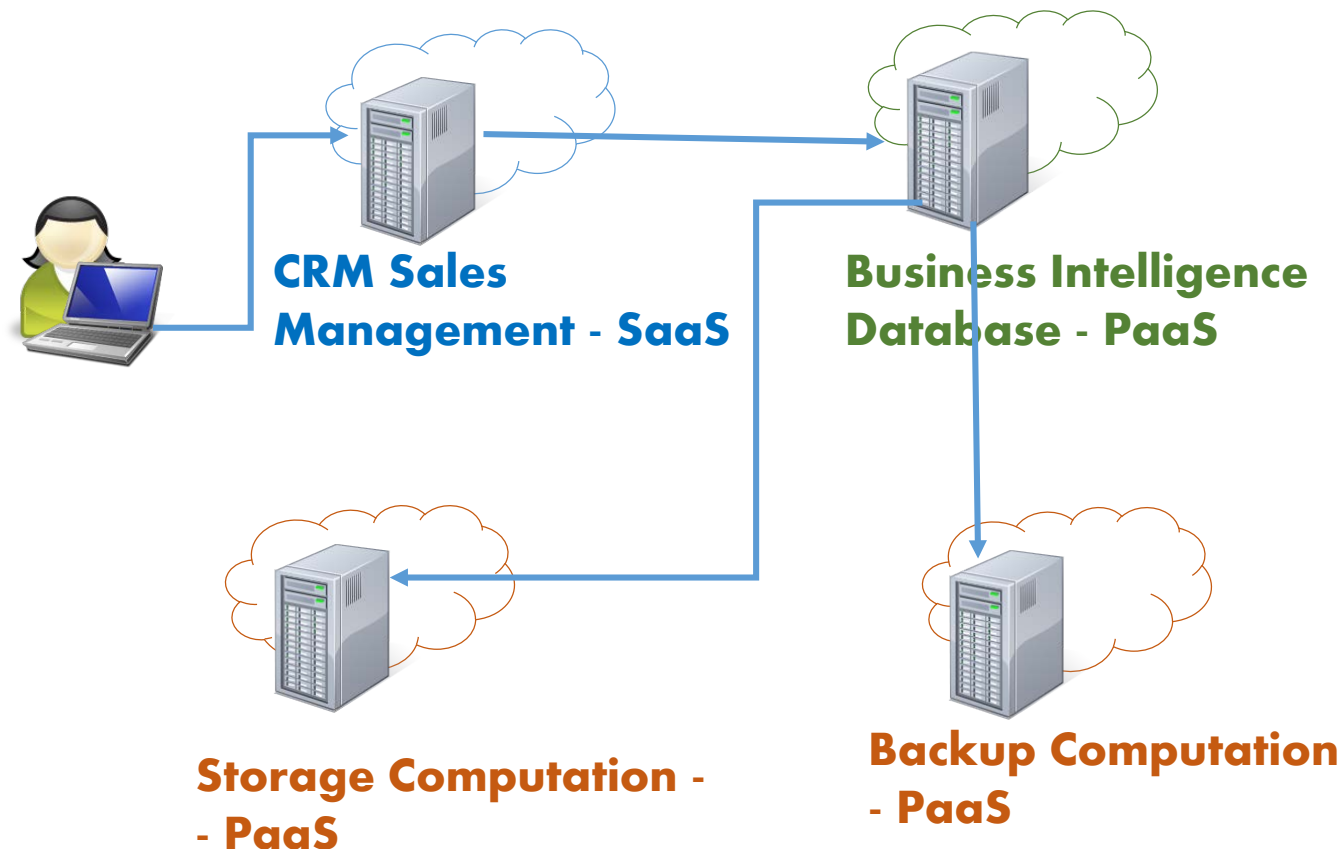
- Lack of Transparency in regard to Cloud Service's operations:
  - **Chain with multiple processors & subcontractors**
  - **Different geographic locations within the EEA**
  - **Transfer to 3rd countries outside the EEA**
  - **Disclosure requests by law enforcement**
- Lack of Intervenability:
  - **Lack of tools provided for exercising data subjects' rights**

Picture after: Siani Pearson, NordSec 2014