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Data Governance, Ethics and the law

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Ethics and law: why does it matter to computer scientists?

Costs: fines and reputation

"In encoding the discs [with copy-protection spyware] Sony and F4i have decided that their intellectual property is more deserving of protection than the intellectual property and personal information on millions of personal computers around the world"

— Excerpt of class-action lawsuit filed against SONY, BMG and First 4 Internet, US District court, New York, 31/10/2005

No Buy-in by needed users

Loss of trust

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- Fines (under GDPR: a fine up to 10,000,000 EUR or up to 2% of the annual worldwide turnover of the preceding financial year in case of an enterprise, whichever is greater (Article 83, Paragraph 4 [14]))
- a fine up to 20,000,000 EUR, or in the case of an undertaking, up to 4% of the total worldwide annual turnover of the preceding financial year, whichever is higher (Article 83, Paragraph 5 &

- Damages: potentially unlimited

- Data breach notification duty:here goes your reputation
-

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Ethics and Data science

- A bit like kissing in the school yard:
- Lots of people seem to be talking about it
- Much fewer actually do it
- Even fewer do it well

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What does „data ethics“ mean?

- Don‘t break the law?
- Don‘t break the spirit of the law?
- Don‘t do harm (non-malevolence)?
- Do good (benevolence)
- Respect autonomy?
- Be just?
- Be a „good X“ (scientists, doctor, politician etc)
  - Noe be bad

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What does professional ethics mean

- Being a „good X“ (scientists, administartor, judge...)
- Not violating the professional rules
- Being perceived by others as exemplary
- Being a „virtuous“ X

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The knowledge trifeca

- Known risks („known kowns“)
- Known possible risks („known unkown“)
- Unknown but real risks (unkonwn unkowns“)

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Known risks and the law

- Privacy
- Property (IP)
  - Commercialisation and independence
  - Benefit sharing
- Openness
  - FOI
  - Funding council guidelines: open access, replicability

Risk Management and planning tools I

- SWOT
  - *strengths*, *weaknesses*, *opportunities*, *threats*
- PEST
  - political, economic, social and technological
- PESTLE
  - political, economic, social, tech; legal; ethical
- STEEPLE (D)
  - Environemntal and demographic
- SPELIT,
  - legal and intercultural factors

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Risk management and planning tools II

- Privacy Impact Assessment
- Cabinett Office Big Data Analysis Tool

Cabinett Office Data Ethics Tool

1. Start with clear user need and public benefit
2. Use data and tools which have the minimum intrusion necessary
3. Create robust data science models
4. Be alert to public perceptions
5. Be as open as possible
6. Keep data secure

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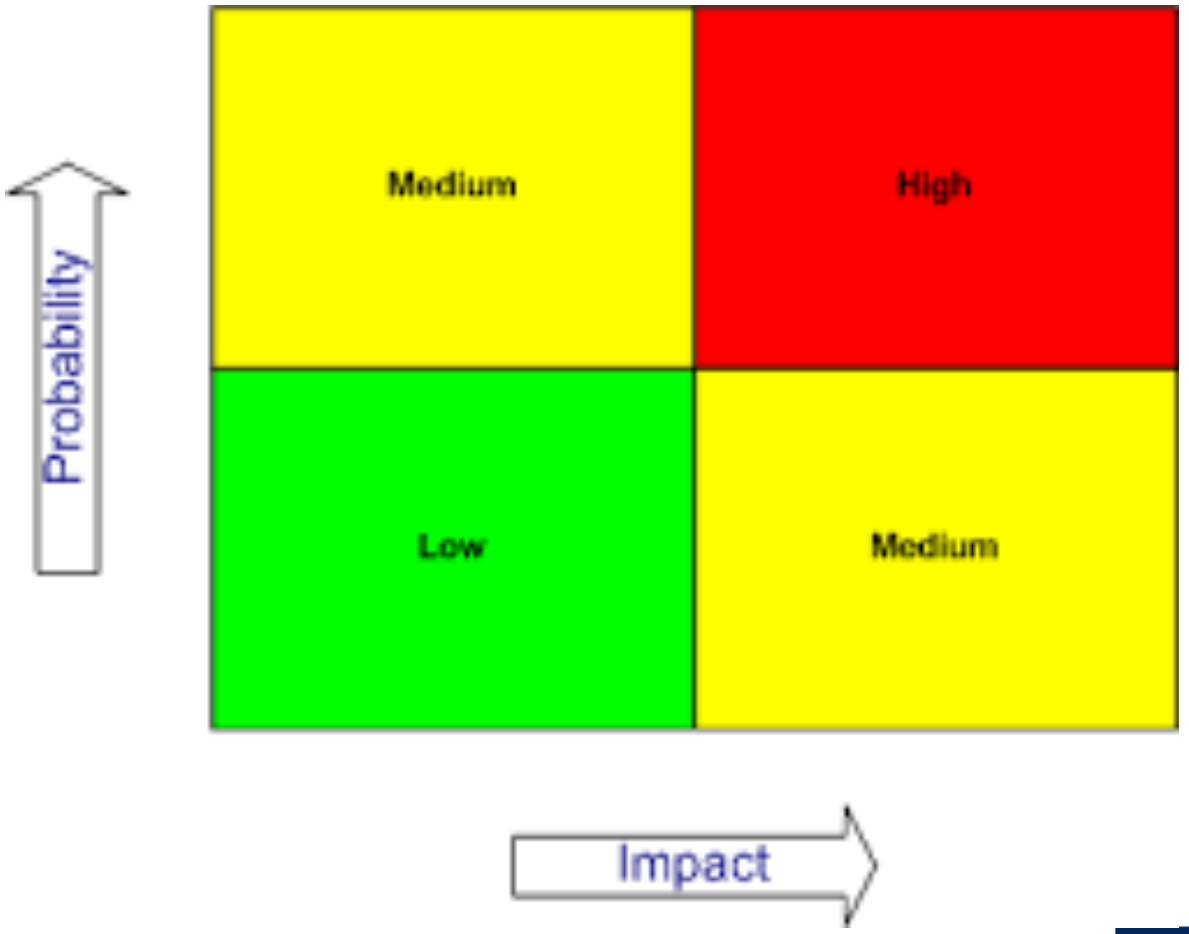

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Case studies

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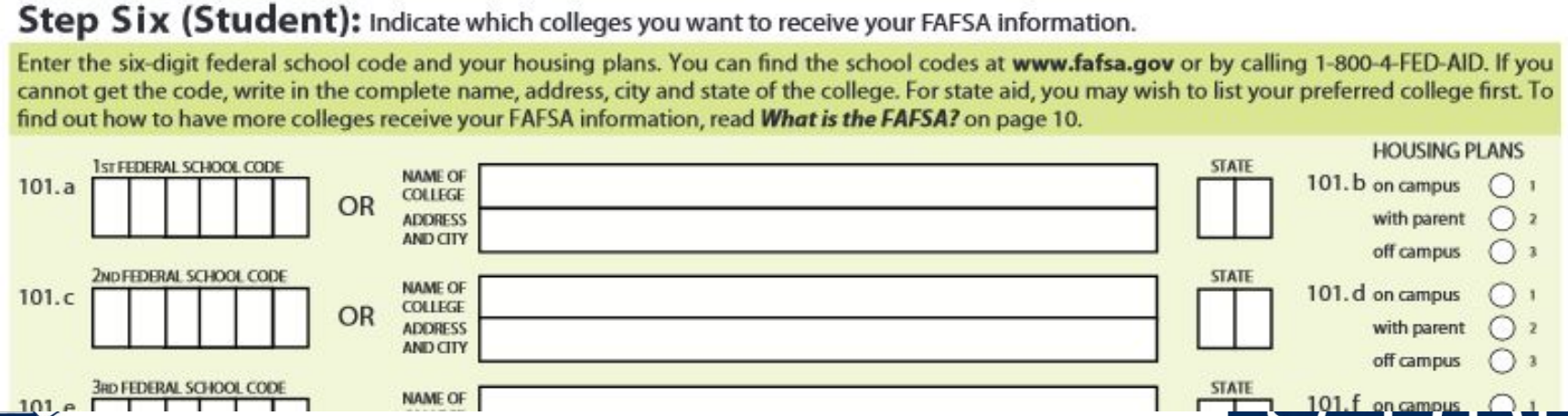
The bad

- US university applicants apply for federal grants
- One section of the application form asks them to rank their universities by preferenes



Step Six (Student): Indicate which colleges you want to receive your FAFSA information.

Enter the six-digit federal school code and your housing plans. You can find the school codes at **www.fafsa.gov** or by calling 1-800-4-FED-AID. If you cannot get the code, write in the complete name, address, city and state of the college. For state aid, you may wish to list your preferred college first. To find out how to have more colleges receive your FAFSA information, read ***What is the FAFSA?*** on page 10.

101.a 1ST FEDERAL SCHOOL CODE | OR | NAME OF COLLEGE / ADDRESS AND CITY | STATE | HOUSING PLANS 101.b on campus 1 / with parent 2 / off campus 3

101.c 2ND FEDERAL SCHOOL CODE | OR | NAME OF COLLEGE / ADDRESS AND CITY | STATE | 101.d on campus 1 / with parent 2 / off campus 3

101.e 3RD FEDERAL SCHOOL CODE | NAME OF | STATE | 101.f on campus 1

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- Form is then shared with universities
- ...which in some cases use this to reject candidates that did not list them first
- Maybe worse, offered less financial suport to candidates who listed them second
- Combined with browsing data from ranking websites

- Data minimisation?
- Data sharing?
- Consent, secondary use/purpose binding principle
- Harming your clients?
- Non-sustainable/harming your future data access

- Privacy
- Harm to the person who supplies the data

The racist sentencing support system

The Legal System Uses an Algorithm to Predict If People Might Be Future Criminals. It's Biased Against Blacks.

And it's terrible at predicting future crimes.

BY JULIA ANGWIN, JEFF LARSON, SURYA MATTU AND LAUREN KIRCHNER, PROPUBLICA MAY 23, 2016 5:16 PM

TOP NEWS

A Black Woman Is Arguing a Big Supreme Court Case Today.

The University of Edinburgh

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- Discrimination
- Violation of laws
- Hidden biases
- Wider social harm

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The ugly

Facebook's mood study: How you became the guinea pig

That controversial research into how posts affect users' emotions is just latest in a long line of privacy flaps -- and apologies -- for the social networking giant.

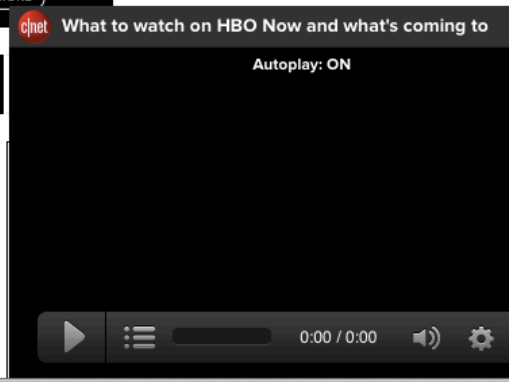
Internet

July 1, 2014
7:45 AM PDT

by Seth Rosenblatt
@sethr

When news spread over the weekend that Facebook had manipulated its news feed to study how social media posts affect people's emotions, the real surprise was that anyone was that surprised.

The study (PDF), published in the Proceedings of the National Academy of Sciences and



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- Privacy
- Autonomy
- Benefits? Justice?

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The good?

Citizen science – where could be the harm in that?

- Citizens record noise levels on mobile phones
- City makes planning decisions on that basis
  - (traffic calming/redirection measures)

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- Who is heard and who is not heard?
- Who suffers from the decision taken?

The good?

Cloudteams

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- Earn points while you share
- Get earlier/cheaper/free access to the apps that are developed
- Make the most of your Facebook account by combining it with CT data

Possible issues

- Is gameification appropriate for health data?
- Risk through cumulative participation with same development team
- Risk of inducing you to violate your obligations