Data Governance, Ethics and the law
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 a class-action lawsuit filed against SONY, BMG and First 4 Internet, US District court, New York, 11/14/2005
No Buy-in by needed users
Loss of trust
• 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
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
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
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
The knowledge trifeca

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

CIRCA 2025

- How precious!
- Mommy, did you ever have privacy?
- Privacy please

So quaint!

Priceless!
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)**
  - Environmental and demographic
- **SPELIT,**
  - legal and intercultural factors
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
Case studies

THE GOOD, THE BAD AND THE UGLY
The bad

- US university applicants apply for federal grants
- One section of the application form asks them to rank their universities by preferences
• 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 support 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 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
• Discrimination
• Violation of laws
• Hidden biases
• Wider social harm
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.

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...
• Privacy
• Autonomy
• Benefits? Justice?
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)
• Who is heard and who is not heard?
• Who suffers from the decision taken?
The good?
Cloudteams

OUR MISSION IS TWO-FOLD

1. OPEN UP THE DEVELOPMENT PROCESS

If you are a software design & developer team, CloudTeams will offer useful tools to collaborate with potential customers, get their feedback and stream it effectively into the work cycle. We believe this will help you become more competitive and offer great applications to the world.

2. ENJOY BETTER APPLICATIONS

If you think software applications should be meaningful and enjoyable, CloudTeams will offer you a way to actively collaborate with creators to shape up any type of software application. We believe that with the right set of tools, transparency & control people like you can make a difference.
• 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