DATA & ETHICS: "WITH GREAT POWER COMES GREAT RESPONSIBILITY"

An Msight Chat • October 15, 2025

*Images generated by Microsoft Copilot

ETHICS, ETHICS EVERYWHERE
THERE ARE WELL-KNOWN CASES OF ETHICAL DILEMMAS

- Cambridge Analytica Facebook data
- NYC "My City" chatbot
- Amazon hiring algorithm
- Clearview AI image database
- Apple AirTags
- Target predictive marketing model

ETHICS IN DATA AND ANALYTICS
SOME HOT TOPICS

Responsible AI: The practice of designing, developing, and deploying artificial intelligence systems in ways that are ethical, transparent, fair, and aligned with human values and societal well-being.

Responsible data: The ethical and secure handling of data to ensure privacy, fairness, transparency, and accountability throughout its lifecycle.

*According to Microsoft Copilot

Right to privacy

Informed consent

Objectivity and fairness

"Explainable AI"

Accountability

Intellectual property

Right to be informed.
Right to consent.

Development data
Sampling
Algorithms
Data ingested by
algorithms in production
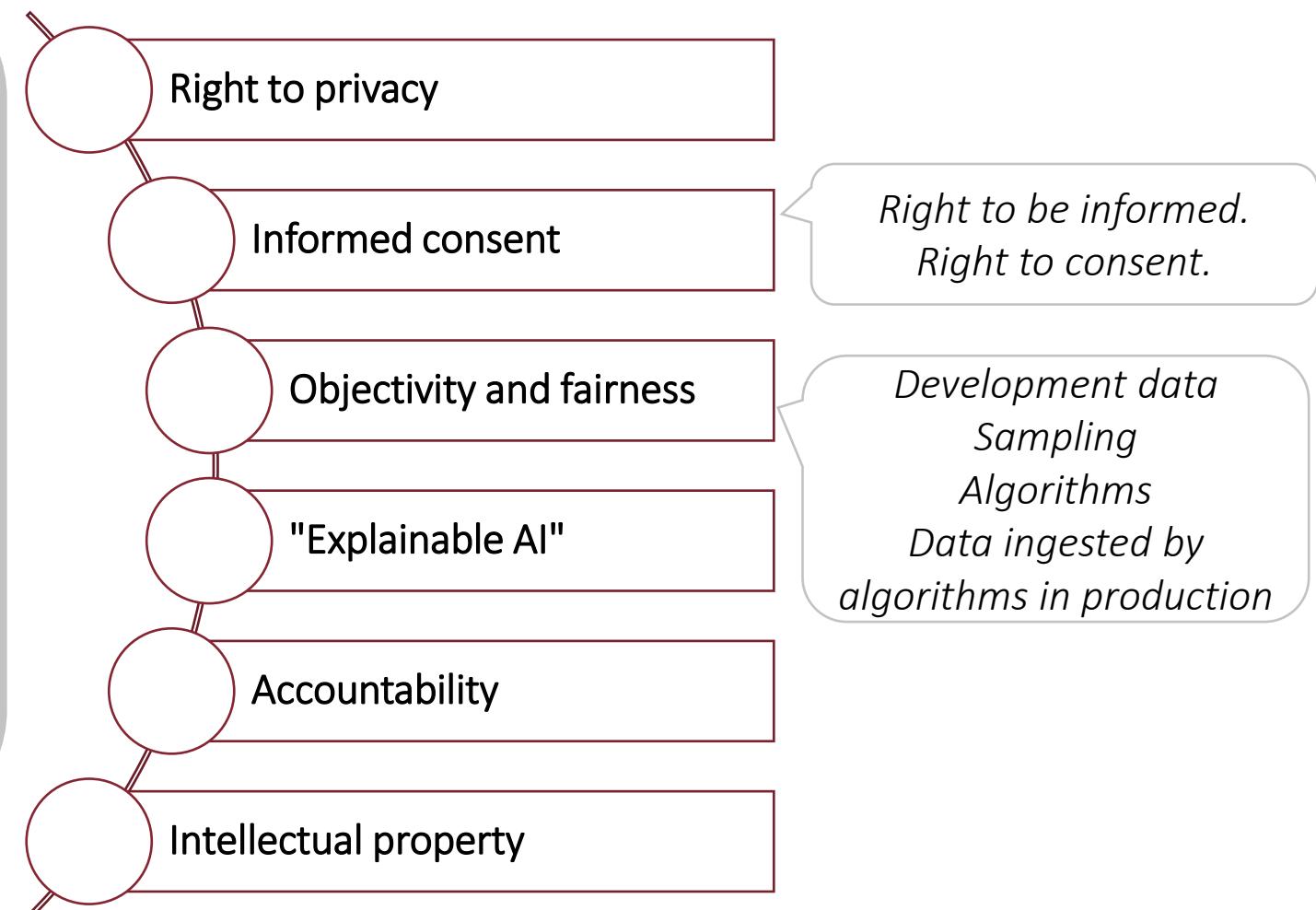
IMPLEMENTATIONS: ETHICS IN DATA AND ANALYTICS
CURRENT LANDSCAPE

- **Regulations**: Data, algorithms
- **Research ethics review**
- Industry **standards and frameworks**
- **Certifications**
- **Professional guidelines and codes of ethics**
- Organizational **policies and practices**
- Working groups, conferences, etc.

- *Respect for stakeholders: data subjects, clients, colleagues/collaborators, users, and the general public*
- *Professional competency*
- *Respect for the profession*
- *Obligation to assume responsibility as a professional*
- *Obligation to do no harm*
- *Honesty/transparency*
- *Fairness*
- *Privacy/confidentiality*

THE NATURE OF ETHICAL DILEMMAS
IF IT WERE EASY, EVERYONE WOULD DO IT
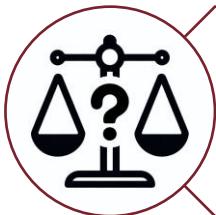
Ethical vs. Legal

Conflicting values

Not always "black and white"

Require careful thought and critical thinking

ETHICAL ISSUES FOR STATISTICIANS AND DATA SCIENTISTS
IT'S ABOUT WHAT YOU DO, NOT WHAT HAPPENS TO YOU

- "Can" vs. "should"
  - Knowing when to do something
  - when NOT to do something.

- Different aspects: Objective, data, algorithms, use.

- Fairness vs. bias
  - Global/social bias vs. personal bias
  - Theory vs. reality
  - Open biases vs. hidden biases
  - Bias in: (1) data, (2) algorithms, (3) users

- Intentionality and justification
  - Do you know what you are doing?
  - How can you demonstrate it?

- Building trust
  - How do we demonstrate our commitment to ethical principles?
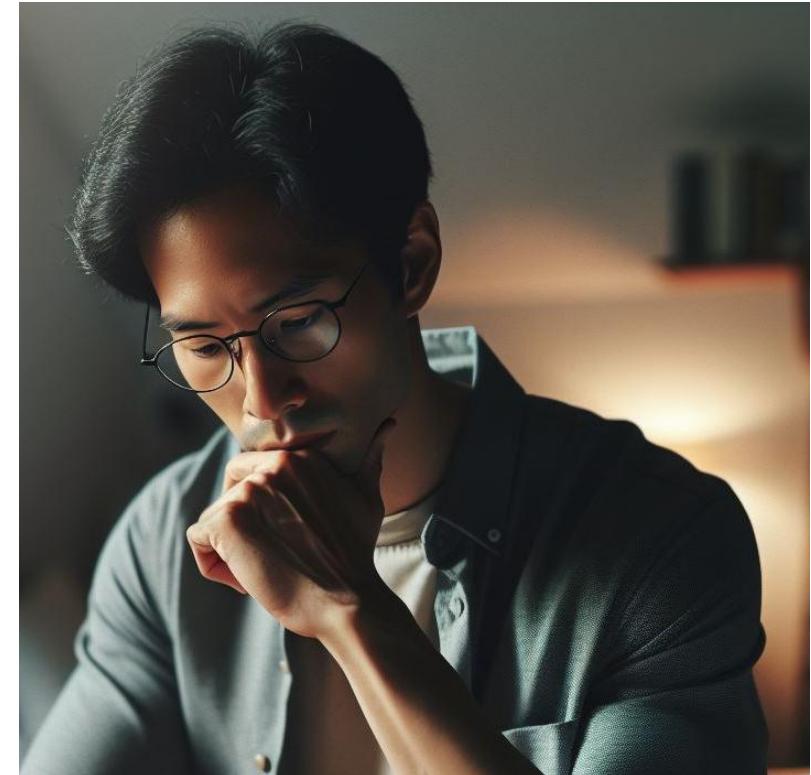
ETHICAL ISSUES FOR STATISTICIANS AND DATA SCIENTISTS
THERE IS A LOT TO CONSIDER IN EACH OF THE FOUR ASPECTS

Objective of the solution

- Should we develop it?
- Targeting vs. fairness
- Experimentation vs. manipulation
- Details of the intended uses
- Potential unintended uses
- Scope of its impact

Data: In development and in production

- Anonymization and encryption are necessary but not sufficient to protect privacy
- Use of data only for defined purposes
- Data minimization
- Inherent biases in modern data sources
- Intellectual property in data

Algorithms

- The selection of the technique: Performance vs. transparency
- Model architecture: variables/features, segmentation, treatments, etc.
- Reducing the cost of misinformation
- Incorporating fairness and eliminating biases

Use of the solution

- Unintended consequences of intended uses
  - Risks and costs of misinformation
  - Consequences of naive uses
- Uses beyond those originally intended
  - Naivety? Manipulation? Malice?
- Perpetuating or worsening bias
- Intellectual properties and ownership

HOW DO I PUT ALL THIS INTO PRACTICE?
TAKE THE TIME AND EFFORT TO DO THE RIGHT THING BY RESPECTING GENERAL PRINCIPLES

Do no harm.

Be fair.

Be honest and transparent.

Take responsibility.

Respect and protect others.

- Be deliberate and intentional in everything you do, down to the smallest details.

- Proactively identify and disclose any conflicts of interest.

- Be aware of all shortcomings.

- Document all decisions and justifications.

- Proactively monitor and correct methodologies, practices, and products: biases, misinformation.

- Take responsibility for own actions and decisions.

QUESTIONS TO USE AS A STARTING POINT
TO GUIDE OUR DECISIONS AND ACTIONS FROM AN ETHICAL PERSPECTIVE

Is it consistent with laws, regulations, and standards?

What are the risks?

Whom does it compromise?

To whom does the information belong?

Whom does it put at risk?

What are the possible consequences?

Is it moral? For whom?

Whom does it benefit?

Does it work as intended for all stakeholders?

Legal/regulatory • Moral • Financial • Reputational • Physical • Psychological • Direct/indirect • Etc.

How do you know? How have you demonstrated it?

Michiko I. Wolcott, Principal Consultant
Msight Analytics

michiko.wolcott@msightanalytics.com
𝕏 @Michiko_Wolcott
📷 @michiko_wolcott
in linkedin.com/in/michikowolcott/
f @msightanalytics
▶ @msightanalytics
M @michiko-wolcott

REFERENCES
(EXAMPLES; NOT EXHAUSTIVE)

EXAMPLES OF REGULATIONS AND STANDARDS

Jurisdiction	Name	URL
European Union	General Data Protection Regulation (GDPR)	https://gdpr.eu/tag/gdpr/
European Union	EU Artificial Intelligence Act	https://artificialintelligenceact.eu/
United Kingdom	UK GDPR and Data Protection Act	https://ico.org.uk/for-organisations/data-protection-and-the-eu/data-protection-and-the-eu-in-detail/the-uk-gdpr/
California, USA	California Consumer Privacy Act (CCPA)	https://oag.ca.gov/privacy/ccpa
Mexico	Federal Law on the Protection of Personal Data Held by Private Parties (LFPDPPP)	https://www.gob.mx/indesol/documentos/ley-federal-de-proteccion-de-datos-personales-en-posesion-de-los-particulares
Canada	Personal Information Protection and Electronic Documents Act (PIPEDA)	https://www.priv.gc.ca/en/privacy-topics/privacy-laws-in-canada/the-personal-information-protection-and-electronic-documents-act-pipeda/
Brazil	General Data Protection Law (LGPD)	https://www.gov.br/esporte/pt-br/acesso-a-informacao/lgpd
Argentina	Personal Data Protection Law	https://servicios.infoleg.gob.ar/infolegInternet/anexos/60000-64999/64790/norma.htm
India	Digital Personal Data Protection Act (DPDP Act)	https://egazette.gov.in/WriteReadData/2023/248045.pdf

EXAMPLES OF FRAMEWORKS AND STANDARDS

Name	Entity	URL
International Compilation of Human Research Standards	Office of Human Research Protections, U.S. Health and Human Services (HHS)	https://www.hhs.gov/ohrp/international/compilation-human-research-standards/index.html
Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research	Office of Human Research Protections, U.S. Department of Health and Human Services (HHS)	https://www.hhs.gov/ohrp/regulations-and-policy/belmont-report/index.html https://www.hhs.gov/sites/default/files/informe-belmont-spanish.pdf
Privacy by Design	Information and Privacy Commissioner of Ontario	https://en.wikipedia.org/wiki/Privacy_by_design
Ethics Guidelines for Trustworthy AI	European Commission	https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai
AI Risk Management Framework	National Institute of Standards and Technology (NIST)	https://www.nist.gov/itl/ai-risk-management-framework
ISO/IEC 42001	International Standards Organization (ISO)	https://www.iso.org/standard/81230.html
IEEE 7000	IEEE Standards Association	https://standards.ieee.org/ieee/7000/6781/
Artificial Intelligence Governance Professional (AIGP) Certification	International Association of Privacy Professionals (IAPP)	https://iapp.org/certify/aigp/

EXAMPLES OF PROFESSIONAL GUIDELINES AND CODES OF ETHICS

Organization	Name	URL
American Statistical Association (ASA)	Ethical Guidelines for Statistical Practice	https://www.amstat.org/your-career/ethical-guidelines-for-statistical-practice
American Statistical Association (ASA)	Statement on Ethical AI Principles for Statistical Practitioners	https://www.amstat.org/docs/default-source/amstat-documents/asa-statement-on-ethical-ai-principles-for-statistical-practitioners.pdf
Association for Computing Machinery (ACM)	Code of Ethics	https://www.acm.org/code-of-ethics
Institute of Management Consultants USA (IMC USA)	Code of Ethics	https://imcusa.org/about/ethics/code-of-ethics/

EXAMPLES OF ETHICAL CASES

- "Facebook-Cambridge Analytica Data Scandal": https://en.wikipedia.org/wiki/Facebook%E2%80%93Cambridge_Analytica_data_scandal

- "Clearview AI": https://en.wikipedia.org/wiki/Clearview_AI

- "Judge denies Apple's attempt to dismiss a class-action lawsuit over AirTag stalking": https://apnews.com/article/apple-airtags-stalking-lawsuits-e59166988920c4ba1e82956ea85c1677

- "Insight - Amazon scraps secret AI recruiting tool that showed bias against women": https://www.reuters.com/article/world/insight-amazon-scraps-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK0AG/

- "NYC's AI Chatbot Tells Businesses to Break the Law": https://themarkup.org/news/2024/03/29/nycs-ai-chatbot-tells-businesses-to-break-the-law

- "How Companies Learn Your Secrets" (Target predictive modeling): https://www.nytimes.com/2012/02/19/magazine/shopping-habits.html?pagewanted=1&_r=1&hp#

- "Artificial Intelligence Bot Becomes Racist And Homophobic After Learning From Humans": https://oecd.ai/en/incidents/16537

- "New York lawyers sanctioned for using fake ChatGPT cases in legal brief": https://storage.courtlistener.com/recap/gov.uscourts.nysd.575368/gov.uscourts.nysd.575368.31.0.pdf

- "Racial Bias Found in a Major Health Care Risk Algorithm": https://www.scientificamerican.com/article/racial-bias-found-in-a-major-health-care-risk-algorithm/