

FLINN

WHAT WORK IS ICO PREPARING
ON ARTIFICIAL INTELLIGENCE &
WHY?

LEONARD W.N. HAWKES

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AGENDA

Introductions (1) (2) & (3)

Project expl^{AI}an – interim report

AI Auditing Framework

Data Analytics & Political Campaigns

but first ~ What is artificial intelligence?

- There is no accepted definition of artificial intelligence or 'AI' but the term is often used to describe when a machine or system performs tasks that would ordinarily require human (or other biological) brainpower to accomplish, such as making sense of spoken language, learning behaviours or solving problems. There are a wide range of such systems, but broadly speaking they consist of computers running algorithms, often drawing on data.

Source: Alan Turing Institute - FAQs

second ~ What is machine learning?

- ❑ Machine learning (ML) is a branch of artificial intelligence that allows computer systems to learn directly from examples, data and experience.

Source: Alan Turing Institute - FAQs

and third ~ What is an AI decision?

- ❑ AI decisions are often based on the outputs of machine learning models, trained on data to generate predictions, recommendations or classifications - for example, whether to grant a customer a loan or invite an applicant to an interview.

Source: ICO Project explAI/n interim report

INTRODUCTION: (1)

- ❑ 2017 Paper – ‘Growing the AI Industry in the UK’
- ❑ The AI Sector Deal – HM Gov. industrial strategy paper 2018
- ❑ ICO Project ExplA/n 2018-2019

Project ExplA/n: the explainability of artificial intelligence (“AI”).

“The goal of this project is to create practical guidance to assist organisations [to explain] decisions made by AI to the individuals affected”.

- Source: ICO Annual Report 2018/19

ARTICLE 22: AUTOMATED INDIVIDUAL DECISION MAKING INCLUDING PROFILING

1. The data subject shall have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her.

2. Paragraph 1 shall not apply if the decision:

(a) is necessary for entering into, or performance of, a contract between the data subject and a data controller;

(b) is authorised by Union or Member State law to which the controller is subject and which also lays down suitable measures to safeguard the data subject's rights and freedoms and interests; or

(c) is based on the data subject's explicit consent.

3. In the cases referred to in points (a) and (c) of paragraph 2, the data controller shall implement suitable measures to safeguard the data subject's rights and freedoms and legitimate interests, at least the right to obtain human intervention on the part of the controller, to express his or her point of view and to contest the decision.

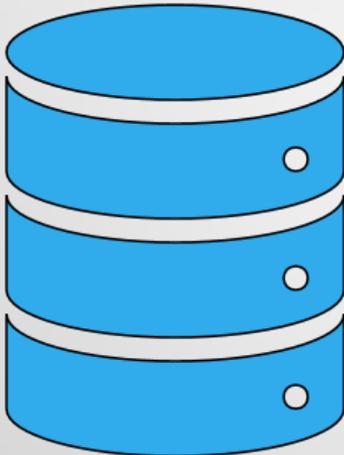
4. Decisions referred to in paragraph 2 shall not be based on special categories of personal data referred to in Article 9 (1), unless point (a) or (g) of Article 9 (2) applies and suitable measures to safeguard the data subject's rights and freedoms and legitimate interests are in place.

AUTOMATED DECISION MAKING

❑ Right of Access by the data subject

❑ A 15 1. The data subject shall have the right to obtain from the controller confirmation as to whether or not personal data concerning him or her are being processed, and, where that is the case, access to the personal data and the following information:

❑ (h) the existence of automated decision-making, including profiling, referred to in Article 22(1) and (4) and, *at least in those cases*, **meaningful information** about the logic involved, as well as the significance and the envisaged consequences of such processing for the data subject.



PROJECT EXPLAIN

- ❑ Project Explain is a collaboration between the Information Commissioner's Office (ICO) and The Alan Turing Institute to create practical guidance to assist organisations with explaining artificial intelligence (AI) decisions to the individuals affected.
- ❑ An interim (June 2019) report sets out the methodology and findings of their research.



PROJECT EXPLAIN

FUNDAMENTAL RESEARCH

- ☐ 2 Citizens juries (18 people in each)
- ☐ Days 1&2
 - ☐ Evidence from 4 experts including on the law concerning data protection;
- ☐ Days 3&4 Scenarios
 1. Healthcare: stroke diagnosis
 2. Recruitment: candidate shortlisting
 3. Healthcare: kidney transplant matching
 4. Criminal justice: offender selection for re-habilitation
- ☐ Day 5
 - ☐ General questions: do human and AI decisions require similar explanations?

INDUSTRY ENGAGEMENT

- ☐ Roundtables
 1. Data Scientists and researchers
 2. Chief Data Officers and 'C-Suite' Executives
 3. DPOs, lawyers and consultants (compliance)
- ☐ Three topics of discussion
 - i. Technical, organisational and compliance approaches to AI
 - ii. Reactions to juror insights
 - iii. Reactions to proposed guidance on AI decisions

PROJECT EXPLAIN

□ Key Findings

- The relevance of **context** for the importance, purpose and expectations of explanations;
- Need for improved **education and awareness** around the use of AI for decision-making; and
- The **challenges** to deploying explainable AI including cost and the pace of innovation.

INTRODUCTION: (2)

- During 2018-19, [ICO] took some significant steps to deliver [our Technology Strategy].
- “We established a new Executive Directorate for Technology Policy and Innovation and appointed Simon McDougall as the Executive Director, reporting directly to the Information Commissioner”.
- Appointed of a postdoctoral research fellow for Artificial Intelligence, Dr Reuben Binns, for a two-year term.

- Source: ICO Annual Report 2018/19

An '*AI auditing framework*' blog has been published since April 2019.

A formal consultation on a proposed Framework for auditing AI algorithms is to expected in January 2020.

AI GOVERNANCE & RISK MANAGEMENT

- The 'fairness and accuracy' implications of AI are not issues to be delegated to data scientists and engineers
- Leadership teams - including DPOs - will be accountable.

Source ~ AI Auditing Framework Call for Input: final considerations and next steps

Posted: 28 Oct 2019

- "It is important that organisations do not underestimate the initial and ongoing level of investment of resources and effort that will be required".
- "As a regulator we will expect the level of governance and risk management capabilities to be commensurate and proportional to their AI data protections risks".

SETTING 'MEANINGFUL' RISK APPETITE

As part of governance and risk management discussions, we often hear from organisations that they have no risk appetite in relation to data protection.

Source ~ AI Auditing Framework Call for Input: final considerations and next steps

Posted: 28 Oct 2019

- ❑ AI systems will often require organisations to decide the appropriate balance between different data protection requirements, for instance between accuracy and fairness.
- ❑ In such cases, adopting a “zero tolerance” approach towards data protection risk would mean that an organisation might be unable to adopt AI altogether.

WHAT ROLE FOR DPIAs ?

Using AI to process personal data is likely to result in high risk to individuals' rights and freedoms from a GDPR perspective, and therefore trigger the requirement to undertake a DPIA.

Source ~ AI Auditing Framework Call for Input: final considerations and next steps

Posted: 28 Oct 2019

- ❑ Carrying out a DPIA will require organisations to:
 - Demonstrate the necessity and proportionality of any AI-related personal data processing;
 - Account for any detriment to data subjects that could follow from any bias or inaccuracy in a system;
 - Explain the rationale behind any trade-offs [balancing];

ONCE IT IS DEVELOPED THE ICO INTENDS TO USE THE AI AUDITING FRAMEWORK TO ASSESS DATA PROTECTION COMPLIANCE OF ORGANISATIONS USING AI.

Source ~ AI Auditing Framework Call for Input: final considerations and next steps

Posted: 28 Oct 2019

List of the AI blogs published Apr - Oct 2019

1. Meaningful human reviews in non-solely automated AI systems
2. Accuracy of AI systems outputs and performance measures
3. Known security risks exacerbated by AI
4. Explainability of AI decisions to data subjects
5. Human biases and discrimination in AI systems
6. Trade-offs
7. Privacy attacks on AI models
8. Data minimisation and privacy-preserving techniques in AI systems
9. Fully automated decision making AI systems: the right to human intervention and other safeguards
10. DPIAs
11. Exercise of rights



INTRODUCTION: (3)

“We are at a crossroads; citizens need greater control about how their data is used, genuine transparency about the use of data analytics, and robust enforcement of their rights. Without an informed debate our deeply-held democratic principles will be permanently undermined”.

“The use of online platforms over the last decade has inevitably led to data-driven political campaigns as political parties seek to take advantage of sophisticated marketing techniques to engage with voters”.

... “as a data protection authority my long-term goal is to maintain public trust and confidence in how data is used, including in the democratic process”.

- Source: Democracy Disrupted? The Use of Data Analytics in Modern Political Campaigns. Elizabeth Denham, Information Commissioner, United Kingdom.

ICO's INVESTIGATION OF DATA ANALYTICS FOR POLITICAL PURPOSES

- ❑ Early 2017 The Observer newspaper micro-targeting of voters by Cambridge Analytica;
- ❑ May 2017 formal investigation by ICO regarding possible misuse of personal data;
- ❑ July 2018 'Democracy Disrupted' report from ICO; and
- ❑ Warning letters to 11 political parties



ICO's INVESTIGATION OF DATA ANALYTICS FOR POLITICAL PURPOSES

- ❑ October 2018 Up-dated enforcement notice for Aggregate IQ and Monetary penalty notice for Facebook;
- ❑ November 2018 ICO Report to Parliament on the use of data analytics in political campaigns;
- ❑ February 2019 fines for Leave.EU and Eldon insurance (trading as GoSkippy);
- ❑ February 2019 Disinformation and 'fake news' final report from HC DCMS Committee



ICO's INVESTIGATION OF DATA ANALYTICS FOR POLITICAL PURPOSES

- ❑ 30 October 2019 Agreement reached between ICO and Facebook:
 - ❑ Facebook and ICO withdraw their respective (procedural) appeals;
 - ❑ Facebook pays £500,000 fine but does not admit liability;
 - ❑ Each party pays their own costs.





“PARLIAMENTARIANS, JOURNALISTS, CIVIL SOCIETY AND CITIZENS HAVE WOKEN UP TO THE FACT THAT TRANSPARENCY IS THE CORNERSTONE OF DEMOCRACY”.

SOURCE: ICO INVESTIGATION OF DATA ANALYTICS FOR POLITICAL PURPOSES A REPORT TO PARLIAMENT 6 NOVEMBER 2018.

“ONE OF THE WITNESSES AT OUR INQUIRY, TRISTAN HARRIS, FROM THE US-BASED CENTER FOR HUMANE TECHNOLOGY, DESCRIBES THE CURRENT USE OF TECHNOLOGY AS “HIJACKING OUR MINDS AND SOCIETY”. WE MUST USE TECHNOLOGY, INSTEAD, TO FREE OUR MINDS AND USE REGULATION TO RESTORE DEMOCRATIC ACCOUNTABILITY. WE MUST MAKE SURE THAT PEOPLE STAY IN CHARGE OF THE MACHINES.”.

SOURCE: HC DCMS COMMITTEE FINAL REPORT HC1791 - DISINFORMTION AND 'FAKE NEWS' ~ 18 FEBRUARY 2019

THANK YOU FOR YOUR KIND ATTENTION



Leonard Hawkes
Solicitor (Juriste Conseil)

leonard.hawkes@flinn.law