

DO ALGORITHMS RULE THE WORLD? ALGORITHMIC DECISION-MAKING AND DATA PROTECTION IN THE FRAMEWORK OF THE GDPR AND BEYOND

Dr. Maja Brkan, LL.M.

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@MajaBrkan

maja.brkan@maastrichtuniversity.nl

algorithm

noun

Word used by programmers when they do not want to explain what they did.

THE BEST FUN SITE = 9GAG.COM

Judiciary?

- Eric Loomis → system Compass
- System Valcri → geographical area

JASON TASHEA OPINION 04.17.17 07:00 AM

**COURTS ARE USING AI TO
SENTENCE CRIMINALS. THAT
MUST STOP NOW**



EXPLAINABILITY?

General Data Protection Regulation

- GDPR and Directive: conditions for automated decision making
- Art. 22: The data subject has the right **not** to be subject to a decision based solely on automated processing, including profiling...
- Solely automated processing, individual decisions, legal / significant effect
- Allowed: necessary for contract, authorised by EU/MS law, explicit consent

Explainability – legal requirement?

- Nowhere in Art 22 or Art 11
- Recital 71: DS has the right to obtain an explanation of the decision reached
- Art 22 controller has to provide safeguards:
 - human intervention (GDPR, Dir)
 - data subject express point of view and
 - to **contest** decision (22(3) GDPR)
 - AT LEAST those safeguards

Transparency & right to explanation

- ‘meaningful information about the logic involved’ (GDPR Art 13,14,15) → meaning?
- GDPR: requires general high transparency:
 - Info to DS concise, easily accessible, understandable
 - DS is informed of purposes of processing
- *The right to explanation?*
 - Wachter/Mittelstadt/Floridi – only *ex ante*
 - Edwards/Veale: accept possibility, practical difficulties
 - Mendoza/Bygrave: in favour of r. to explanation

Right to explanation: rationale

1. right to contest and challenge the decision – ineffective (DS needs data and reasonable explanation of grounds)
2. recital 71: right ‘to obtain an explanation of the decision reached’ → political compromise → final word: interpretation CJEU
 - true no binding legal force, but no *contra legem* int.
 - often takes recitals into account, activist court
3. AT LEAST safeguards from 22(3)
meaningful logic AT LEAST in for Art. 22(1) and (4)

Right to explanation: legal construction?

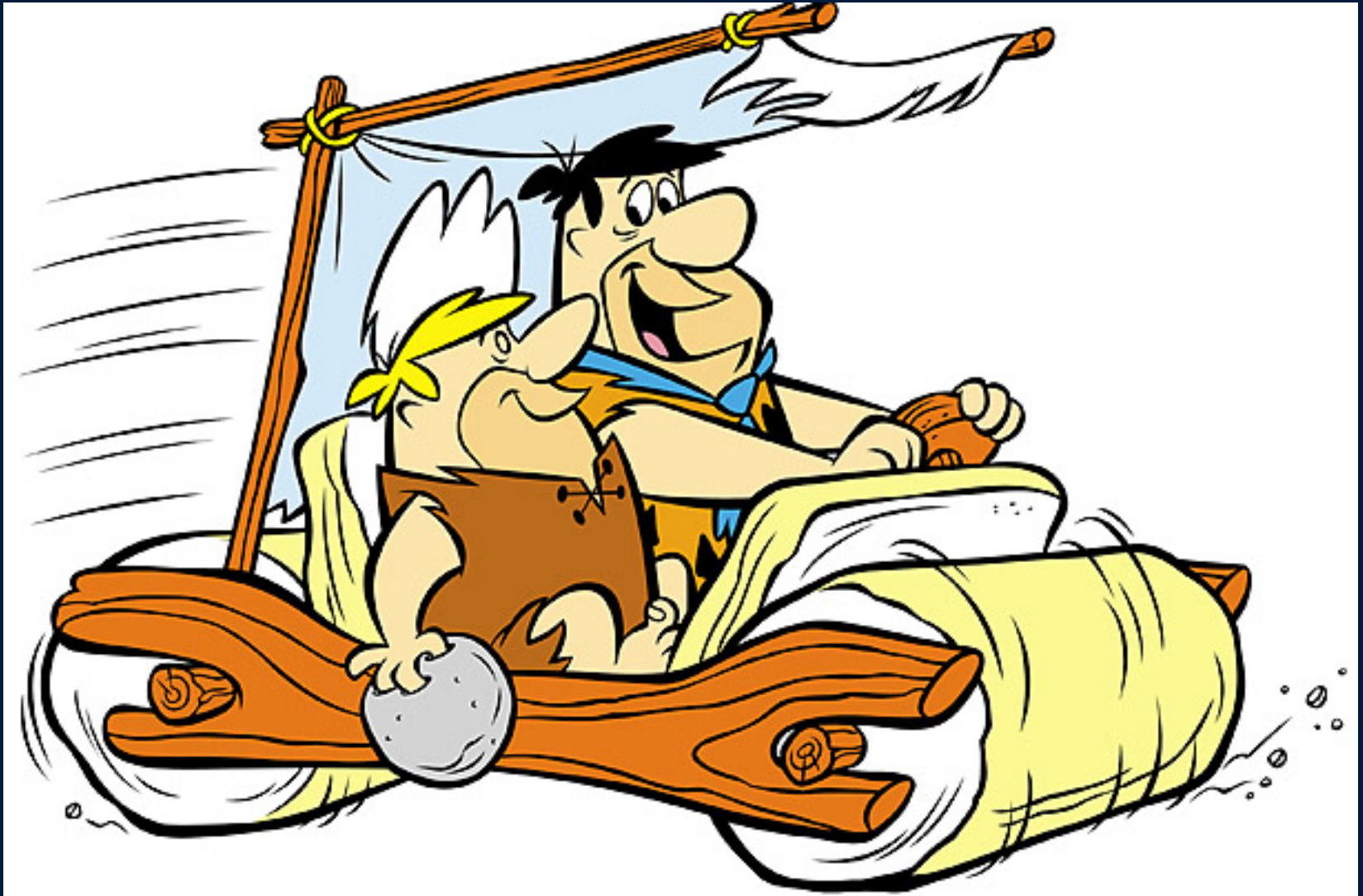
- Methodology:
- “Article 22, read in the light of Recital 71, in combination with Articles 13(2)(f), 14(2)(g) and 15(1)(h) GDPR, should be interpreted in a way that they give the data subject the right to an *ex post* explanation of the automated decision.”
- *Google Spain*: right of access, right to object → right to erasure

Right to explanation: minimalistic interpr.

- explanation of logic at least for sensitive data → possible if explicit consent (9(2)(a)) → medical diagnostics
- ...and if processing in public interest (9(2)(g)) → prevention of terrorism (Kadi saga)
- ideally:
 - Input data for automated decision
 - List of factors that influenced decision
 - Relative importance of factors
 - Explanation of reasons

Thank you for your attention!

@MajaBrkan



“Whatever you are studying right now, if you are not getting up to speed on deep learning, neural networks, etc., you lose. We are going through the process where software will automate software, automation will automate automation.”

Mark Cuban

https://www.brainyquote.com/quotes/mark_cuban_824656?src=t_automation

**Thank you for
your attention!**

Tech challenges: project w/ colleagues from economics, DKE

- Saliency map – where the neural network is paying attention (Driessens)
- Quantitative Input Influence (Datta et al.)
- Ranking of algorithms? Where do you draw the line?
- More explainable algorithms would be more used by businesses – depending also on the domain of businesses
- Choosing an algorithm with lower performance but higher explainability – a trade-off – where do you draw the line which you would use and which you would not use?