

Spotting algorithms in the wild

Nicolas Kayser-Bril | Dataharvest | November 2020

@algorithmwatch | @nicolaskb

Birdwatching













AlgorithmWatching!

Where to look

What tools to use

What to look for



AlgorithmWatching – Easy

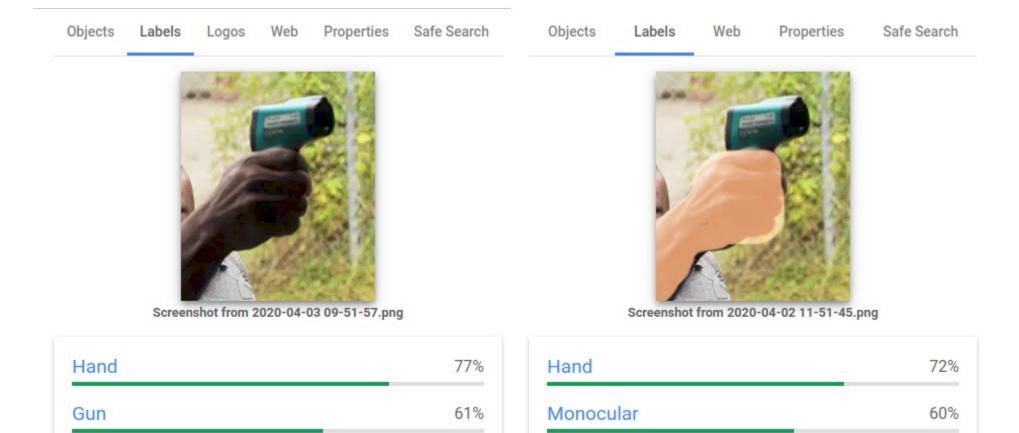
- System is visible
- Unlimited access to black-box
- Angles to test: illegal discrimination, amplification of bias







Blackbox with unlimited access





Blackbox with unlimited access

DETECT LANGUAGE	GERMAN	TURKISH	ENGLISH	\sim	, →	FRENCH	GERMAN	ENGLISH	\sim		
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Send feedback



Blackbox with unlimited access

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		Coronavirus-		Tre 1.



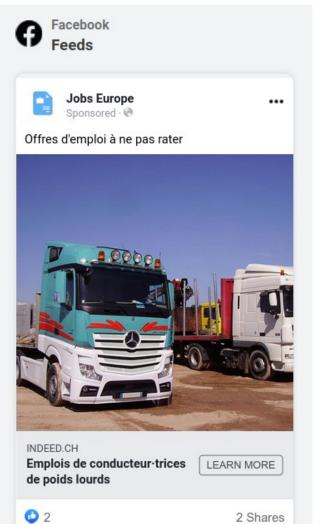
AlgorithmWatching – Hard

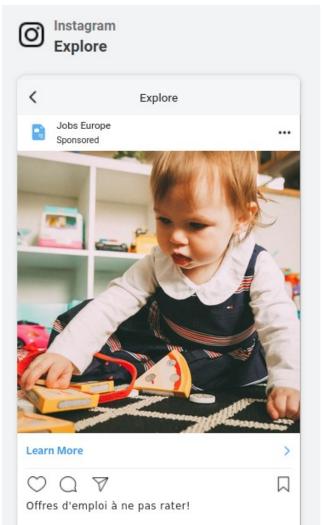
- System is visible
- Limited access to black-box
- Angles: Skew in content distribution





Black box with restricted access

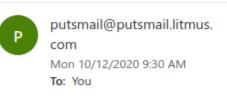






Black box with restricted access

Inquiry about your company
This message was identified as junk. It's not junk



Dear Sir or Madam,

My name is Ugochi Emenayo, I am from Lagos, Nigeria. I am a graduate student in Computer Science at Afe Babalola University.

 $\rightarrow \dots$

I saw that your company was at the forefront of research on crypto-currencies, such as Bitcoin. I would be happy to discuss over the phone with your press officer in order to learn more about your projects.

You can find information about our faculty here: <u>http://www.abuad.edu.ng/computer-science/</u>

With best regards



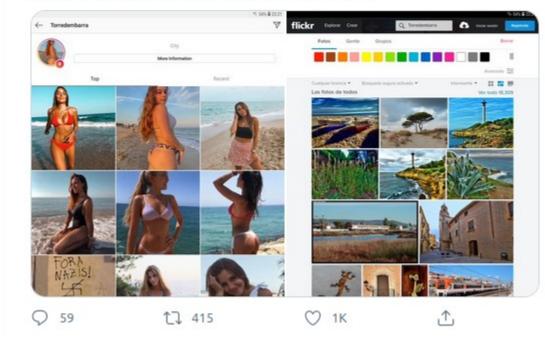
Black box with restricted access



Ismael Peña-López @ictlogist · Aug 17

He ido a parar accidentalmente al tag "Torredembarra" de Instagram. No he podido evitar comparar los resultados (filtro: popularidad) con la que fue la red social de fotografía por excelencia: Flickr. La diferencia es sideral.

Las conclusiones son muchas. Y ninguna halagüeña.





AlgorithmWatching – Impossible

- System is invisible
- No access to blackbox
- FOIA don't bring much





Blackbox with no access

-BriefCan WHO WE SERVE PRODUCTS SOLUTIONS TECHNOLOGY RESOURCES PARTNERS COMPANY CONTACT

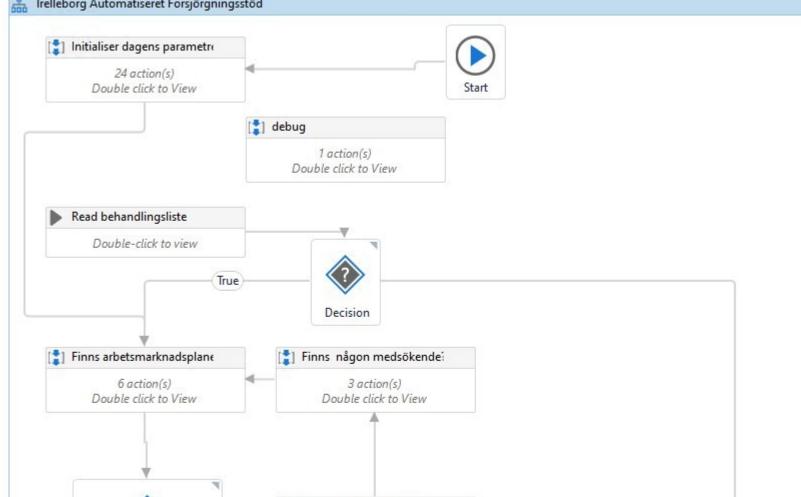
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Code with no access to production server





Secret black-box

Enfin, la délégation considère nécessaire **qu'une évaluation régulière de cette technique** puisse être réalisée par le parlement et qu'un rapport lui soit remis annuellement, pendant la durée de l'expérimentation, sur l'évaluation de l'efficacité des algorithmes mis en œuvre.

Recommandation n° 6 : Proroger, à titre expérimental, la technique dite de l'algorithme prévue par l'article L. 851-3 du code de la sécurité intérieure. N'envisager son extension aux données de navigation sur internet, et en particulier aux *URL*, que sous réserve d'un renforcement conséquent des garanties entourant la mesure et de la mise en place d'un contrôle parlementaire renforcé.



AlgorithmWatching – Unsolved issues

- Same stories as 10 years ago
- Hard to talk with impacted people (algorithms are invisible)

