



Alan Turing

Are *non-diverse* AI research and development teams risking bias in innovated algorithms and artefacts?

Dr Huma Shah

Director of Science, EU Horizon2020 CSI-COP research and innovation project

Associate Member, Data Science Research Centre

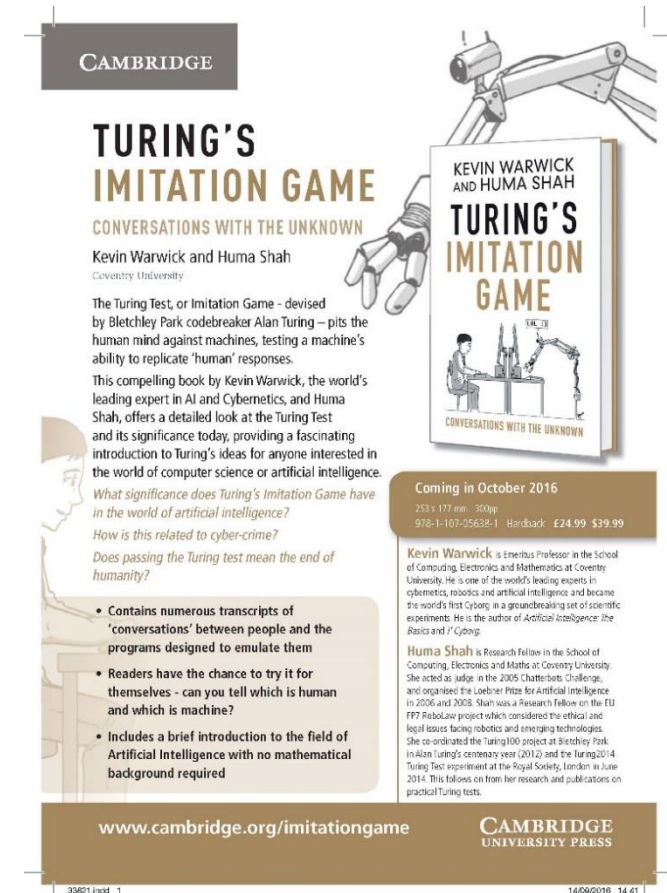
Assistant Professor 'Trust in AI', School of Computing, Electronics and Mathematics

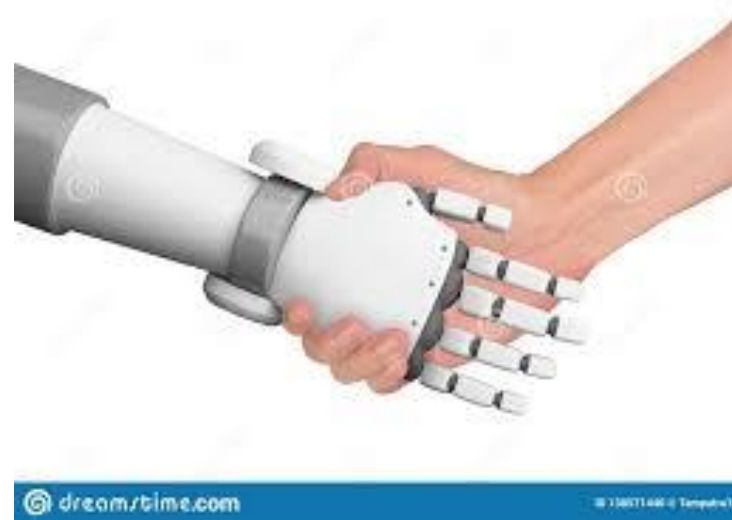
Faculty of Engineering, Environment and Computing

My Activities include....

- **Science Director (CoI), EU Horizon2020 SwafS15-2019 *CSI-COP*.** Coventry University coordinating 30month €1.99m, 11-partner international consortium.
CORDIS: <https://cordis.europa.eu/project/id/873169>
- **Member of the EU AI Alliance**
- **Member of the European Platform for Women Scientists (EPWS)**
- **West London STEM Ambassador**

Book:
published by
Cambridge University Press, 2016





20 Artificial intelligence (AI): Mar

slideshare.net/LuminaryLabs/hype-vs-reality-the-ai-explainer/20-20Artificial_intelligence_AI_Marketing_term

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The big picture

Artificial intelligence (AI): Marketing term that describes a continuum of non-living analytical power, fueled by fast processing and data storage's declining costs. Applications today are termed *weak AI* (like IBM Watson), which are algorithms built to accomplish a specific task. *Strong AI* (like Skynet) is a term for hypothetical future applications that will replicate human intelligence.

Big data: Buzzword alluding to a machine's ability to generate insights and learn from massive data sets, because sensors, software, and recordkeeping generate a lot of data. For example, The Weather Company and IBM researched weather's impact on business by analyzing millions of data points from weather sensors, aircraft, smartphones, buildings, and vehicles.

20

Recommended

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- Teaching Techniques: Project-Based Learning Online Course - LinkedIn Learning
- TEDx Manchester: AI & The Future of Work

AI is not a marketing term!!!
It is a scientific field

https://www.slideshare.net/LuminaryLabs/hype-vs-reality-the-ai-explainer/20-20Artificial_intelligence_AI_Marketing_term

Tweets with replies by Turing2014 x

twitter.com/Turing2014/with_replies

Apps download Bookmarks Home Home Home... Customize Links Research THE ALAN TURING... Conversation, Dece... Test Match, County... Other bookmarks

Turing2014
20.1K Tweets

Turing2014 @Turing2014 · Sep 25
Tweet below example of AI hype "how to implement #AI faster".

Manoj Suvarna @msuvarna · Sep 25
Still wondering how to implement #AI faster? Join #HPE #Nvidia and #BlueData at the #AISummit this week. Booth #510 #Unlockyourdata



18:17
29/09/2019

Promising
magic by
“unlocking
data”.

<https://twitter.com/msuvarna/status/1176936163581386752>

Cheat. Dress better.

Get new ideas for what to wear this autumn.
We combine expert stylists with clever A.I. to
find great clothes in your style, size and budget.

It's so easy it feels like cheating.

Shop over 500 brands and get £15 off
your first order at thread.com/tube



THREAD

Clever AI?

Ad on Metropolitan Line
tube,
Thursday October 17,
2019

Artificial Intelligence meets Natural Stupidity

Article by **Drew McDermott**

published in

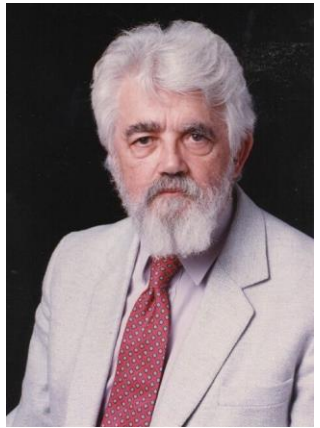
ACM SIGART Bulletin Issue 57, April 1976: pages 4-9

Seriously though....

- The */* in *AI* represents intelligence

Origins of Artificial Intelligence (AI)

- Credit where it's due! AI coined by computer scientist **John McCarthy** in **1955** - field emerged from a scientific gathering in 1956 at a now famous Dartmouth Conference in the US.
- Followed on from **Alan Turing's** scholarship on machine intelligence during and after WWII: ***imitation game***



Alan Turing

- Turing's 1948 essay *Intelligent Machinery*:
 - “...first manifesto of artificial intelligence”

Copeland, B. J. (2004).

The Essential Turing: The Ideas That Gave Birth to the Computer Age.

Clarendon Press: Oxford, UK. p. 486

Most visual representation of
an 'artificial intellect' would
be an embodied, *thinking*
robot

Seeking Artificial Intelligence



KYOTO – A 400-year-old temple is attempting to hot-wire interest in Buddhism with a robotic priest it believes will change the face of the religion

“This robot will never die; it will just keep updating itself and evolving,”

“With AI we hope it [robot] will grow in wisdom to help people overcome even the most difficult troubles. It’s changing Buddhism”

JAPAN TIMES: <https://www.japantimes.co.jp/news/2019/08/15/business/tech/kyoto-temple-robot-priest/#.XYdv1VKjIU>

Smart machines and algorithms

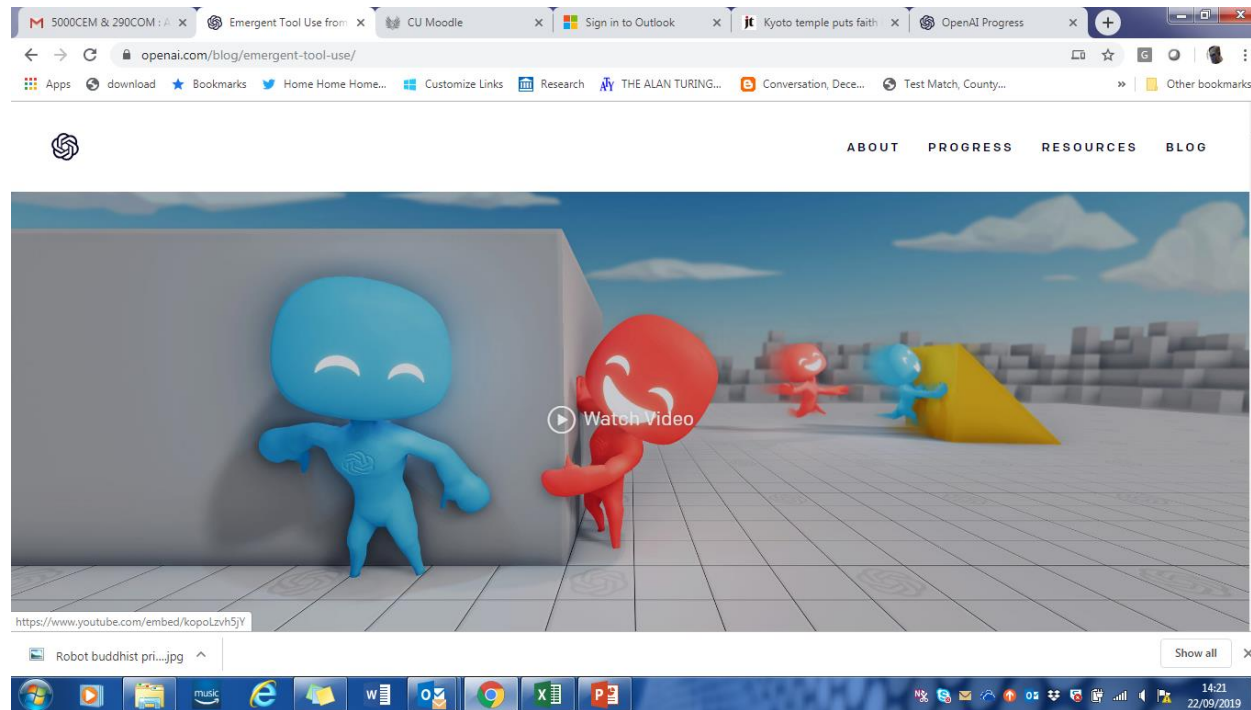
IBM Watson 2011



Google DeepMind's AlphaGo 2016



AI 'Playing hide and seek'



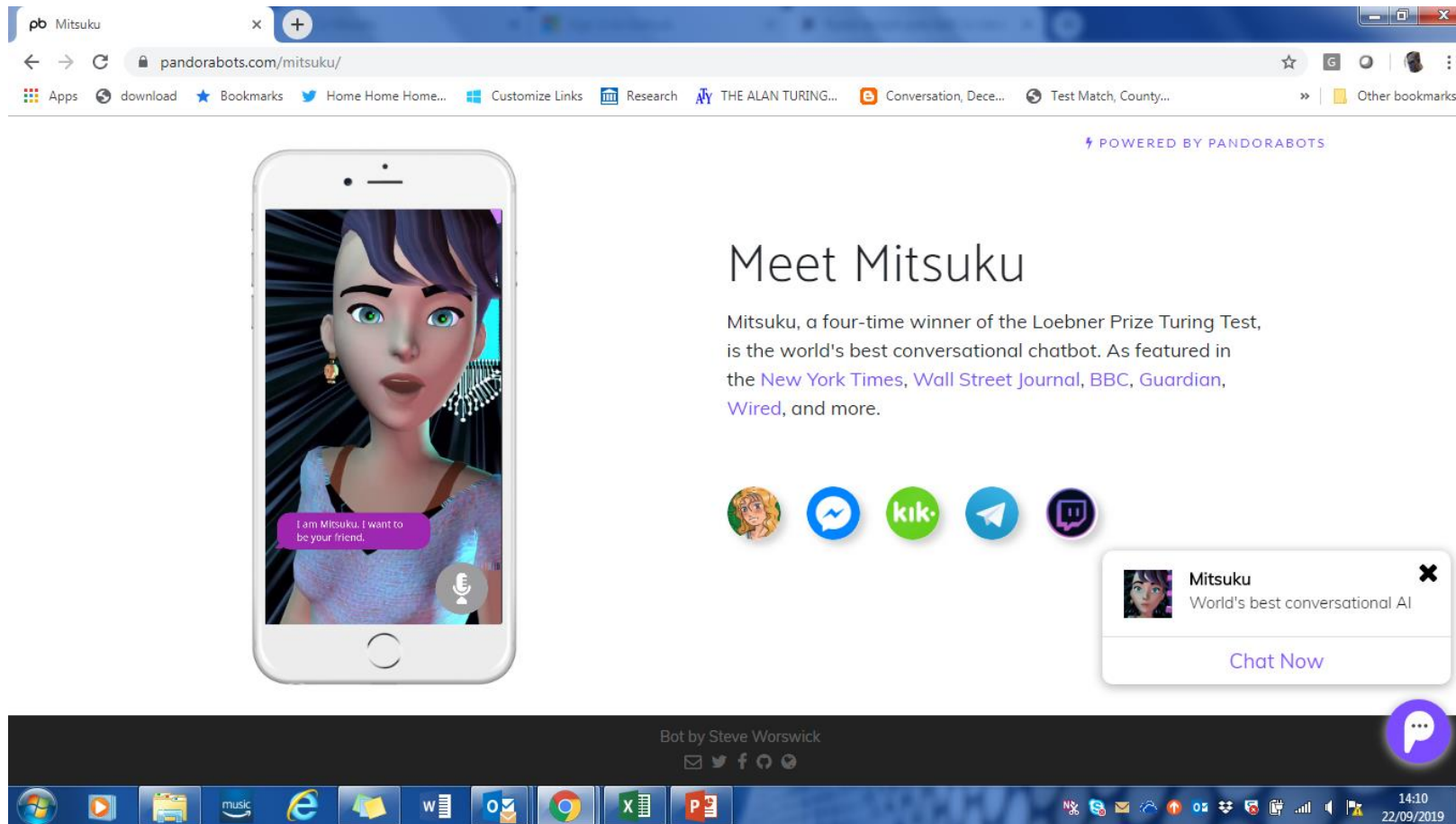
OpenAI's project

Emergent Tool Use from Multi-Agent Interaction (2019)

Agents observed “**progressively more complex tool use** while playing a simple game of hide-and-seek. ...in new simulated hide-and-seek environment, **agents build a series of six distinct strategies and counterstrategies ...some of which we did not know our environment supported.**”

<https://openai.com/blog/emergent-tool-use/>

Four Loebner Prize-winning Chatbot



Steve Worswick's
Mitsuku chatbot
wins
2019 Loebner Prize

AISB: https://aisb.org.uk/new_site/?p=350

But what is *Intelligence*?

- Turing (1948):
 - “..idea of intelligence is emotional, rather than mathematical”

Turing's view

- Turing (1948):
 - “The **extent to which we regard something as behaving in an intelligent manner is determined as much by our own state of mind and training as by the properties of the object under consideration**”

AI: Simulating the human mind

- “Programming a machine to think.....
process should bear a close relation to that
of *teaching*”

Turing, 1951 Lecture **Can Digital Computers Think?** in

Copeland, B. J. (2004). *The Essential Turing: The Ideas That Gave Birth to the Computer Age*.

Clarendon Press: Oxford, UK. p. 486

As Turing said.....

- the pursuit of building thinking machines would:

“help us greatly in finding out how we think ourselves”

Turing, 1951 Lecture **Can Digital Computers Think?** in

Copeland, B. J. (2004). *The Essential Turing: The Ideas That Gave Birth to the Computer Age*.

Clarendon Press: Oxford, UK. p. 486

Intelligence testing and scientific method

- H.J Eysenck (1985):
 - “Intelligence tests are not based on any very sound scientific principles”
 - “..not a great deal of agreement among experts regarding the nature of intelligence”

(p. 8 in 1985 reprint of book *Know your own IQ*, Penguin books).

Information processing view

- **Joseph Fagan:** **information processing** as an “**access to opportunity**” to enter the world of knowledge.

Intelligence - Fagan

- Fagan (2000: p. 168):
 - “... consider the implications for society of defining intelligence as processing ...controversy surrounding the term *intelligence* has arisen and continues because intelligence has historically been defined as *how much one knows* rather than how well one processes.”

Intelligence - Fagan

- Fagan (2000: p. 168):
 - **“IQ scores, by convention, are based on how much one knows relative to one's age peers.”**

Information processing & knowledge

- **Fagan:**

- “...**intelligence is processing** and that processing can be measured by performance on certain **elementary cognitive tasks.**”
- “An **IQ score**, on the other hand, **depends** not only on processing ability but **on *what one has been taught.***”

Information processing & knowledge

- **Fagan:**

- “...**information is processed, the mind changes.**”

- “**That change is called knowledge**”.

How do we convey our knowledge?

Communication

- “Language is a set of vocal or written signs and symbols that permits a social group to communicate, and facilitates thinking and actions of individuals” (Fischler and Firschein, 1987: p. 157)

Communication contd.

- “Language, in the full sense of the term, is species-specific to [hu]man...”

Turing on language

- Turing's 1948 essay *Intelligent Machinery*:
 - "... learning of languages an impressive human activity"

Turing test for intelligent machinery

- Turing explored intelligent machinery through ability of a **machine to think**

Turing test for intelligent machinery

- Turing: Thinking is *buzzing in the head*

Avoid definitions

- Turing did not define intelligence or machine intelligence (please see Plato's *Laches* dialogue, or read W.V.O. Quine)

Avoid definitions

- Turing proposed practical way to assess intelligence through Imitation Game, popularly known as the **Turing test**.

Learning - Imitation

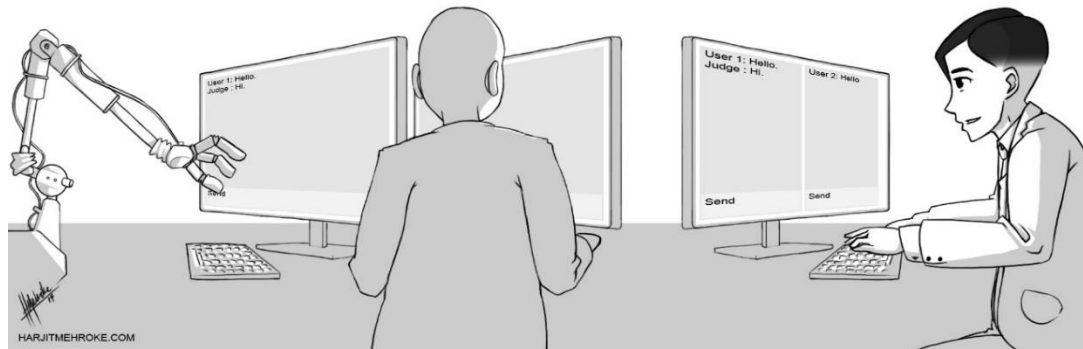
- Learning by imitation – look at how children learn

Learning - Imitation

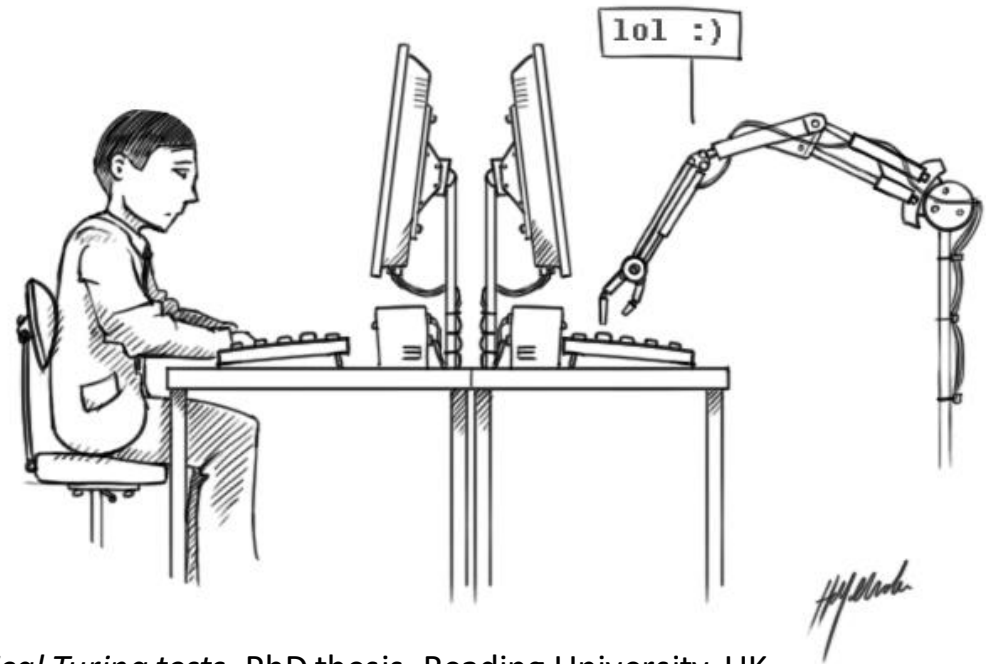
- Turing test measures a machine's intellectual capacity/ to answer any question in a “satisfactory” and “sustained” way (1950) by imitating the sorts of answers a human would give to any questions

Turing's two tests for machine thinking

Simultaneous Comparison



Viva Voce



Shah, H. 2011. *Deception-detection and machine intelligence in Practical Turing tests*. PhD thesis, Reading University, UK
PDF available for download from [Academia.edu](https://www.academia.edu) and [ResearchGate](https://www.researchgate.net)

Current state of the Art: Turing test1



Turing test2

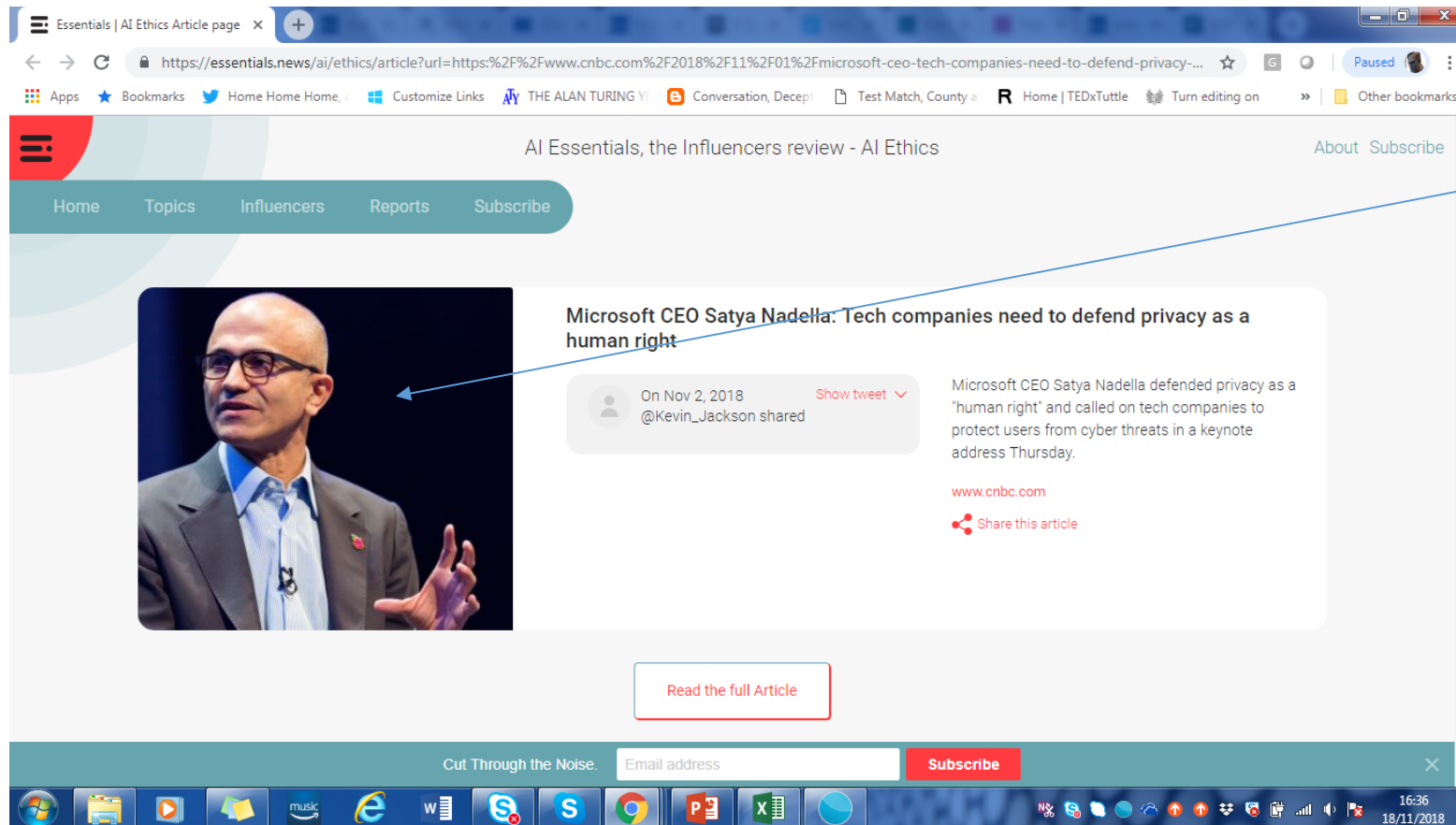


Issues in Nascent AI technologies

Privacy

- **Privacy:**
 - **data protection concerns** arising from artificial intelligence ‘approaches’
(**machine learning** applied to **big data** sets)

Privacy is a human right



**Microsoft CEO
Satya Nadella:**

- “Tech companies
need to defend
privacy as a human
right”

Privacy as a fundamental right

- **“Privacy is a fundamental right:**
 - **Essential to autonomy**
 - **Protection of human dignity**
 - **Serving as the foundation upon which many other human rights are built.”**

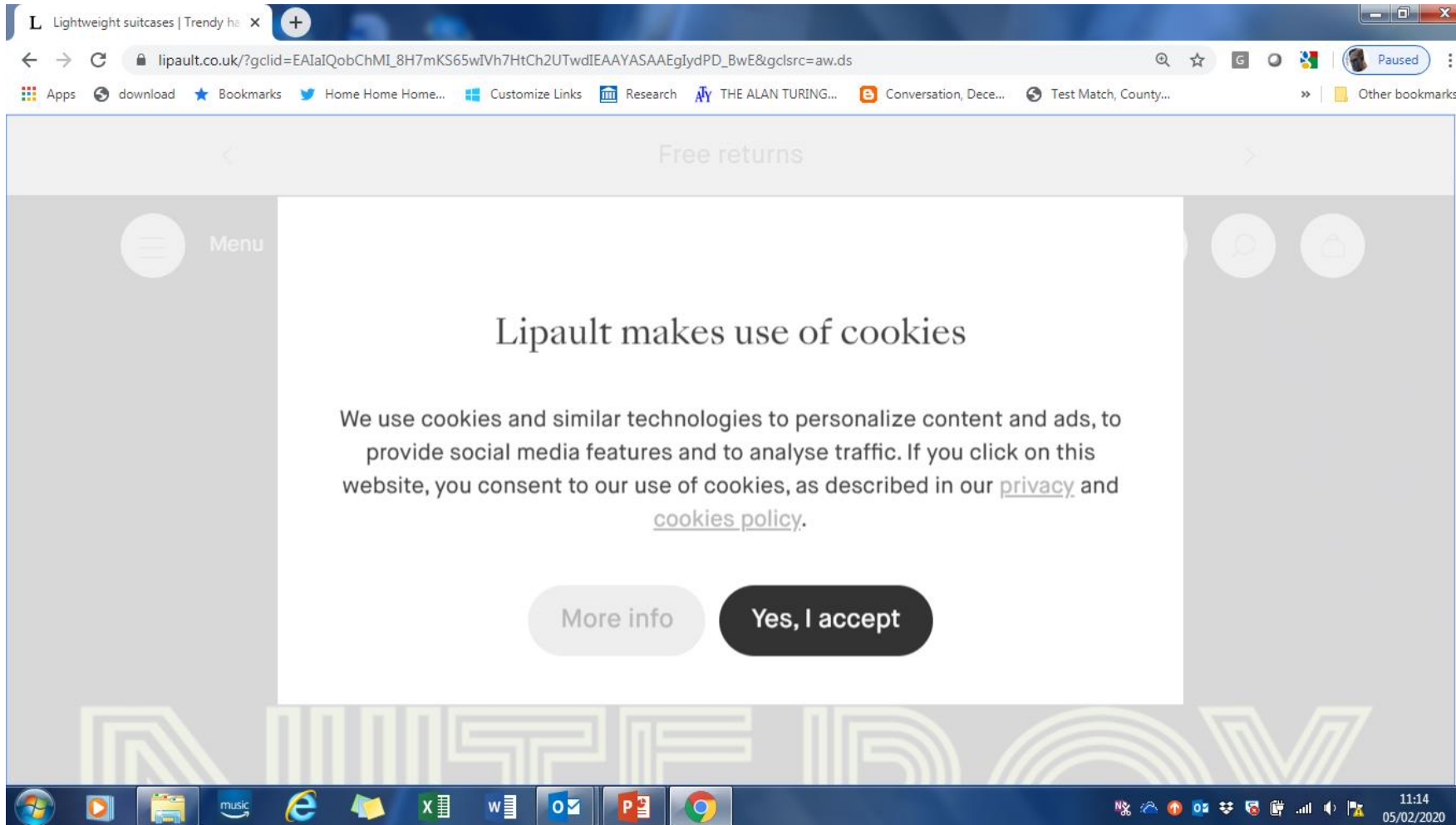
<https://privacyinternational.org/explainer/56/what-privacy>

Sharing personal data

A. Weigend. 2017. *Data for the People: How to Make Our Post-Privacy Economy Work for You*. Basic Books: New York, USA (pages 2-3):

- “Every day **more than a billion people create and share social data [online]....**”
- “**Some of these data are shared knowingly and willingly...**”
- “**..part and parcel of the convenience of using the Internet and mobile devices.**”

Tracked without *willing* consent



Lipault luggage



Lipault's Privacy Policy

The screenshot shows a web browser window displaying the Lipault Paris Privacy Policy page. The browser's address bar shows the URL `lipault.co.uk/privacy-policy/privacy-and-security.html`. The page header includes the Lipault Paris logo and navigation links such as 'Find a Store', 'My Account', and 'Basket'. The main heading is 'Privacy policy'. On the left, a sidebar menu lists various sections: 'Terms of use', 'FAQ', 'Our guarantee', and 'Privacy policy' (which is expanded to show sub-sections like 'Personal information', 'Sensitive information', etc.). The main content area, titled 'Last Updated: 11/06/2018', contains an introductory paragraph about the collection and use of personal information. Below this, a section titled 'Personal information' lists specific data points collected, including name, gender, birthday, postal address, telephone number, email address, IP address, credit/debit card number, profile picture, and social media account ID. The Windows taskbar at the bottom shows the system clock as 18:59 on 24/08/2019.

Privacy policy

Last Updated: 11/06/2018

We want you to be familiar with how we collect, use and disclose Personal Information (as defined below). This Privacy Policy describes our practices in connection with Personal Information that we collect through websites from which you are accessing this Privacy Policy (the "Websites"), through the software applications made available by us for use on or through computers and mobile devices (the "Apps"), through our social media pages and apps, through HTML-formatted email messages that we send to you that link to this Privacy Policy, as well as through your offline interactions with us where notice is legally required (collectively, including the Websites, Apps, Social Media Pages and offline interactions, the "Services").

● Personal information

„Personal Information“ is information that identifies you as an individual or relates to an identifiable individual, such as:

- Name
- Gender
- Birthday
- Postal address (including billing and shipping addresses)
- Telephone number
- Email address
- IP address
- Credit and debit card number
- Profile picture
- Social media account ID

Online trading and collecting data

- **Lipault's** online privacy information reveals: “We and our service providers **collect Personal Information** in a variety of ways”
- Lipault defines **personal information**: “..information *that identifies you as an individual or relates to an identifiable individual*, such as:
 - Name
 - Gender
 - Birthday

Lipault's data sharing

- Lipault **personal information** sharing “..information *that identifies you as an individual or relates to an identifiable individual*, such as:
 - Postal address (including billing and shipping addresses)
 - Telephone number
 - Email address
 - IP address
 - Credit and debit card number
 - Profile picture
 - Social media account ID
 - Travel information, including trip flight information

Websites and Cookies

- Cookies:
 - “... are **small text files that websites place on your device as you are browsing**”
 - “... can **store a wealth of data**, enough to potentially identify you without your consent.”
 - “...primary tool that advertisers use to track your online activity so that they can target you with highly specific ads”

From here: <https://gdpr.eu/cookies/>

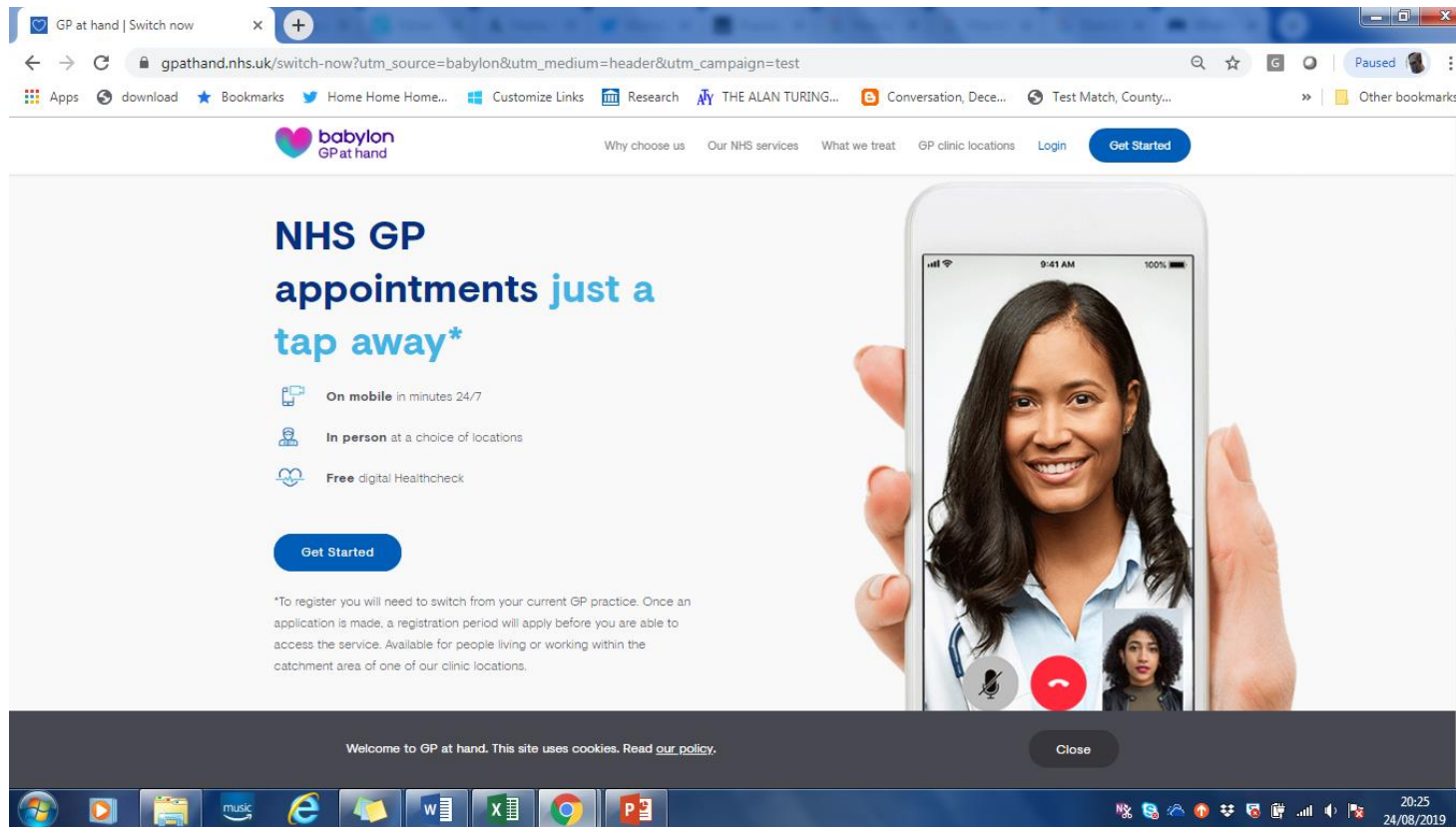
Third-party access to personal information

- **Lipault's online practice of sharing your personal information with third-parties: “We disclose Personal Information”:**
 - **“To our affiliates** for the purposes described in this Privacy Policy.”
 - You can consult the list and location of our affiliates at www.aboutbags.com . Affiliates as used in this document means the entities controlled by, under common control with or controlling us.

Third-party access to Lipault customers' personal information

- “To our **third party service providers, to facilitate services they provide to us [Lipault]**”.
 - These can include providers of services such as website hosting, data analysis, payment processing, order fulfilment, information technology and related infrastructure provision, customer service, email delivery, auditing, and other services.
- “To **third parties, to permit them to send you marketing communications, consistent with your choices**”.
- “To **third-party sponsors of sweepstakes, contests, and similar promotions**”

Privacy and Smart Phone Apps



Babylon health app:
<https://www.babylonhealth.com/>

Embedded Trackers in Smart Phone Apps

The screenshot shows the Exodus v1.2 application interface. At the top, there's a navigation bar with 'Exodus Privacy', 'Reports', 'Trackers', and 'Analysis' tabs. The main content area displays information for the 'Babylon: online doctors & NHS GP at hand' app. It shows 5 trackers and 26 permissions. A 'Signed by' section provides technical details like Fingerprint, Issuer, Subject, and Serial. Below this, there are two detailed sections: '5 Trackers' and '26 Permissions'. The 'Trackers' section lists AppsFlyer, Facebook Login, Google Crashlytics, Google Firebase Analytics, and MixPanel. The 'Permissions' section lists various Android permissions with their descriptions and risk levels (Dangerous or Normal).

5 trackers

26 permissions

Babylon: online doctors & NHS GP at hand

Version: 3.22.1.11049-armeabi-v7a
Creator: Babylon Health
Downloads: 100,000+ downloads

Other versions On Google Play APK fingerprint

Signed by:
Fingerprint: 39d94af68f7620a9ed4533201e8b1bb5539408e8
Issuer: countryName=UA, stateOrProvinceName=Odessa, localityName=Ukraine, organizationName=Ciklum, organizationalUnitName=Android, commonName=Eugene Dudnik
Subject: countryName=UA, stateOrProvinceName=Odessa, localityName=Ukraine, organizationName=Ciklum, organizationalUnitName=Android, commonName=Eugene Dudnik
Serial: 1389021976

This report was automatically issued on Aug. 18, 2018, 8:31 p.m.
This report was automatically updated on Aug. 18, 2018, 8:31 p.m.

5 Trackers

We have found **code signature** of the following trackers in the application:

- AppsFlyer
- Facebook Login
- Google Crashlytics
- Google Firebase Analytics
- MixPanel

A tracker is a piece of software meant to collect data about you or your usages. We do not guarantee the exhaustiveness of this list.

Here is the list of trackers signatures found by static analysis in this APK. This is not a proof of activity of these trackers. The application could contain tracker(s) we do not know yet. If you have doubts about this report, contact us at contact@exodus-privacy.eu.org.

26 Permissions

We have found the following permissions in the application:

Permission	Description	Risk Level
ACCESS_COARSE_LOCATION (android.permission)	Access Approximate Location (Network-Based)	Dangerous
ACCESS_FINE_LOCATION (android.permission)	Access Precise Location (GPS And Network-Based)	Dangerous
ACCESS_NETWORK_STATE (android.permission)	View Network Connections	Normal
AUTHENTICATE_ACCOUNTS (android.permission)		Normal
BLUETOOTH (android.permission)	Pair With Bluetooth Devices	Normal
BROADCAST_STICKY (android.permission)	Send Sticky Broadcast	Normal
CAMERA (android.permission)	Take Pictures And Videos	Dangerous
FLASHLIGHT (android.permission)		Normal
GET_ACCOUNTS (android.permission)	Find Accounts On The Device	Dangerous

Babylon health app has these **embedded trackers**:

Facebook Login
AppsFyer
Mixpanel
Google Firebase
Google Crashlytics

Sensitive Personal Information and Privacy

- Menstruation data is being monetised:
 - “Out of **36 apps** tested by ***Privacy International** **61% automatically transfer data to Facebook the moment a user opens the app.**”
 - “This happens whether the user has a Facebook account or not, and whether they are logged into Facebook or not”
 - “Menstruation apps are not just concerned with menstruation cycles”
 - [“Menstruapps – How to Turn Your Period Into Money \(For Others\)”](#), they collect information about your health, your sexual life, your mood and more ..”

* <https://www.privacyinternational.org/long-read/3196/no-bodys-business-mine-how-menstruation-apps-are-sharing-your-data>

General Data Protection Regulations (*GDPR*)

- **EU GDPR:**

- “Stronger rules on data protection mean **people have more control over their personal data and businesses benefit from a level playing field.**”

https://ec.europa.eu/commission/priorities/justice-and-fundamental-rights/data-protection/2018-reform-eu-data-protection-rules_en

GDPR and consent

- From the UK Information Commissioner Office (ICO):
 - The GDPR sets a high standard for **consent**.
 - **Consent means offering individuals real choice and control.**
 - Genuine consent should put individuals in charge, build trust and engagement, and enhance your reputation
 - Consent requires a positive opt-in.
 - **Explicit consent requires a very clear and specific statement of consent.**

From here:

<https://ico.org.uk/for-organisations/guide-to-data-protection/guide-to-the-general-data-protection-regulation-gdpr/lawful-basis-for-processing/consent/>

General Data Protection Regulations (*GDPR*)

- “[UK] Information commissioner Elizabeth Denham’s **investigation into the [mis]use of data in elections and campaigns, finds:**
 - **"a disturbing disregard for voters’ personal privacy”**
- <https://ico.org.uk/media/action-weve-taken/2260271/investigation-into-the-use-of-data-analytics-in-political-campaigns-final-20181105.pdf>

General Data Protection Regulations (*GDPR*)

- In **October 2018**, UK Information Commissioner's Office (**ICO**) **fined Facebook £500,000**, the maximum under applicable data protection laws, for its **part in passing data on 87 million users to Cambridge Analytica**, which used it **during the 2016 US presidential campaign**.

<https://ico.org.uk/about-the-ico/news-and-events/news-and-blogs/2018/10/facebook-issued-with-maximum-500-000-fine/>

General Data Protection Regulations (*GDPR*)

- In **July 2019** UK's ICO announced **intent to fine British Airways £183.39m** for infringement of the GDPR following British Airways' data breach:
 - “involved **user traffic to the British Airways website being diverted to a fraudulent site**. Through this false site, **customer details were harvested by the attackers**. **Personal data of approximately 500,000 customers were compromised in this incident**, which is believed to have begun in June 2018.” <https://ico.org.uk/about-the-ico/news-and-events/news-and-blogs/2019/07/ico-announces-intention-to-fine-british-airways/>

BIAS

Bias

- **Bias:**
 - how some algorithms discriminate against certain sections of society

Using 'AI' in recruitment: *Self-fulfilling prophecy?*

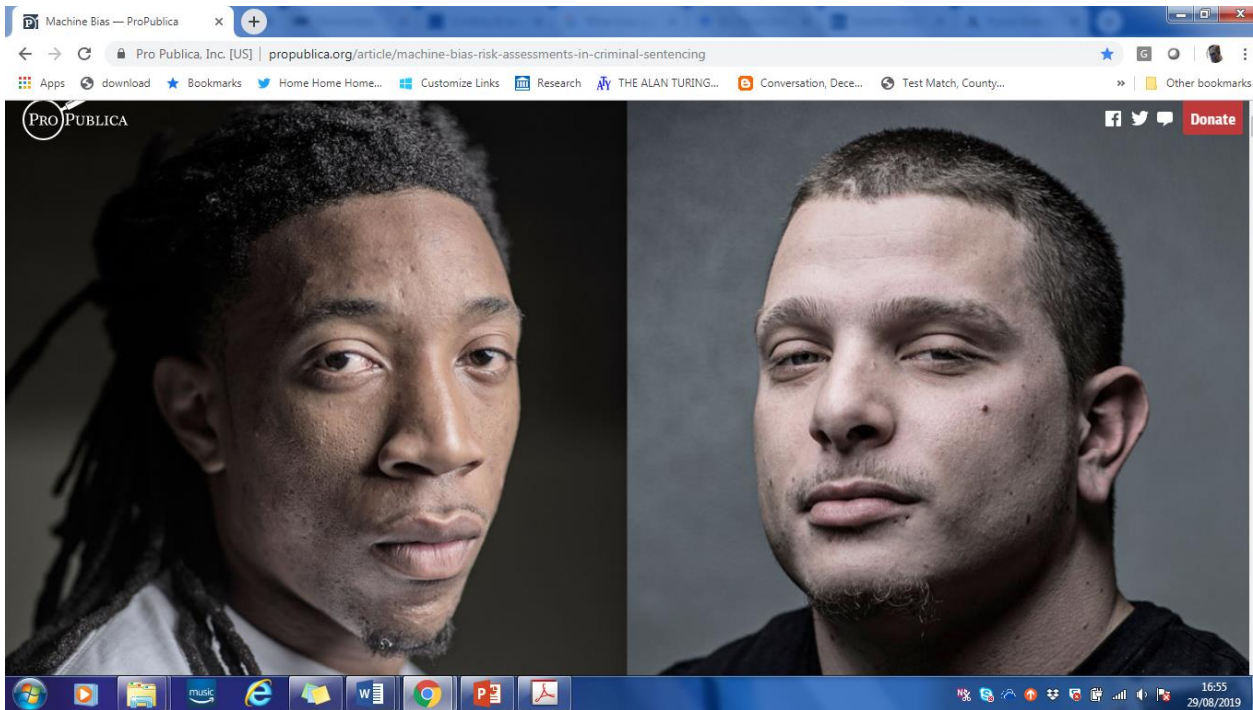
- Biased algorithms – Amazon's Recruitment model
 - “Amazon's computer models were trained to vet applicants by observing patterns in resumes submitted to the company over a 10-year period. Most came from men, a reflection of male dominance across the tech industry.”
 - “Amazon's system taught itself that male candidates were preferable. It penalized resumes that included the word “women's,” as in “women's chess club captain.” And it downgraded graduates of two all-women's colleges...”

From Jeffrey Dastin, 2018 in Reuters:

<https://www.reuters.com/article/us-amazon-com-jobs-automation-insight/amazon-scrap-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK08G>

AI4EU Cafe: 5 February 2020

Bias in AI technologies



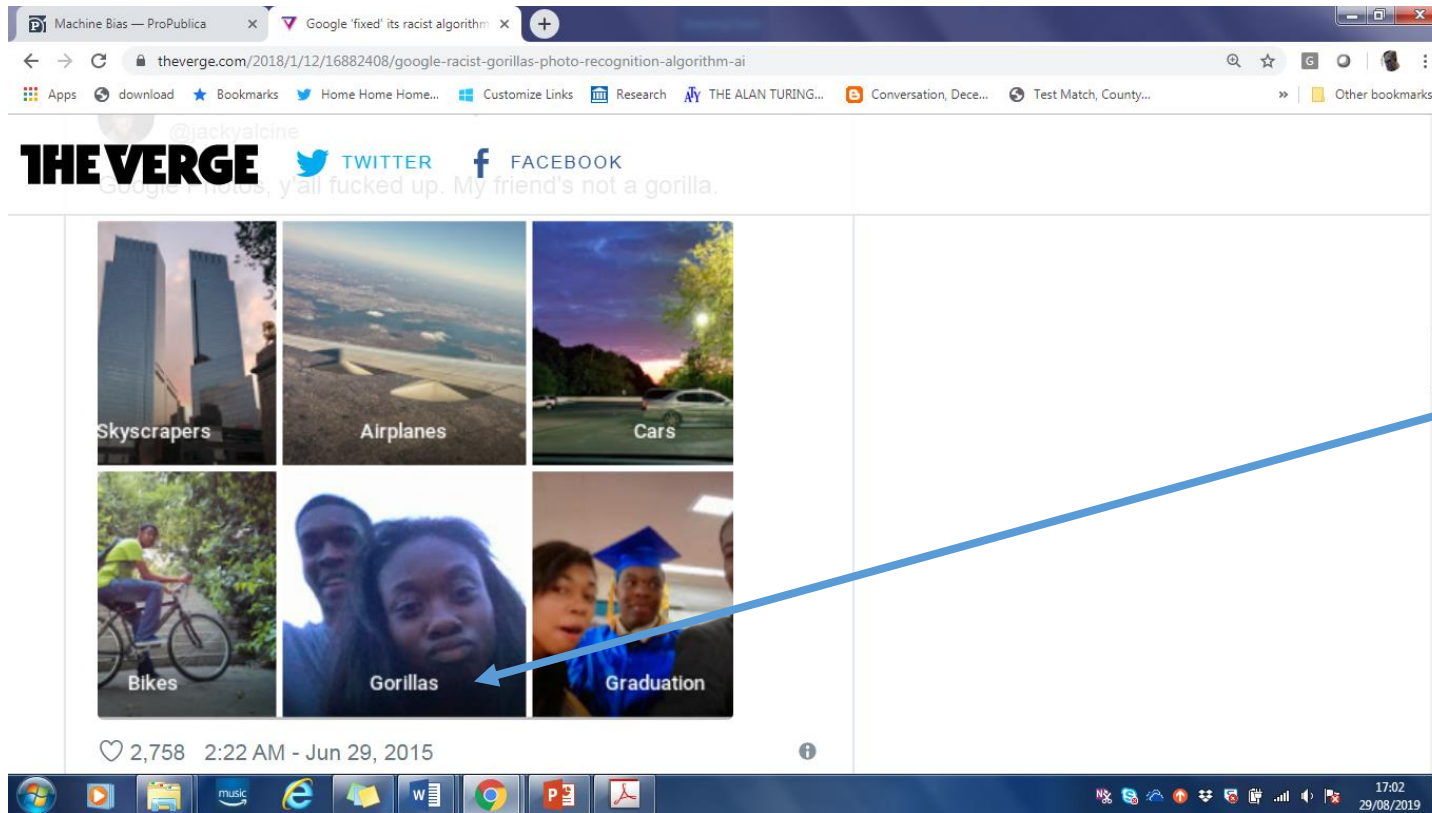
<https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing>

Anguin et al., 2016:

-“There’s **software** across the country [US] to **predict future criminals**. And it’s biased against blacks.”

-“...the **algorithm was somewhat more accurate than a coin flip**”

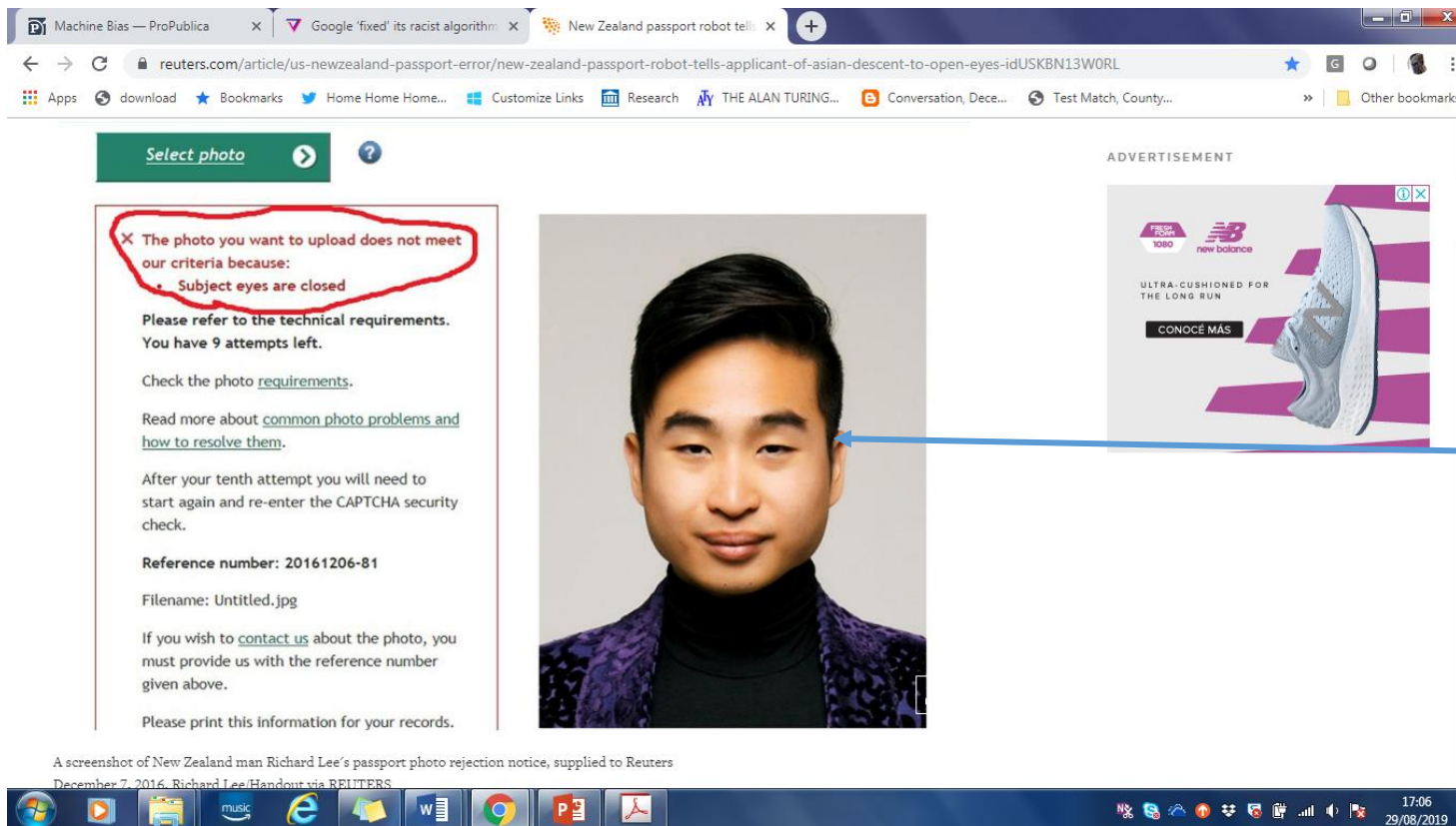
Google's algorithm and bias



“Google ‘fixed’ its racist algorithm by removing gorillas from its image-labeling tech”

<https://www.theverge.com/2018/1/12/16882408/google-racist-gorillas-photo-recognition-algorithm-ai>

New Zealand's passport renewal system



“New Zealand passport robot tells applicant of Asian descent to open eyes”

<https://www.reuters.com/article/us-newzealand-passport-error/new-zealand-passport-robot-tells-applicant-of-asian-descent-to-open-eyes-idUSKBN13W0RL>

Live Facial Recognition

- “Over the past few years six [UK] forces, including the Metropolitan police, have trialled facial recognition, with spectacularly poor results.”
- “After surveilling hundreds of thousands of people, the Met has made [a mere handful of arrests](#) using this technology in the past four years.”
- “Indeed, [81% of the “suspects”](#) caught by the cameras were simply innocent bystanders not on the police’s watchlists. Two of the trials even had an error rate of 100%.”

David Davis is Conservative MP for Haltemprice and Howden:

<https://www.theguardian.com/commentisfree/2019/sep/20/facial-recognition-technology-privacy>

Twitter @CatHallam1: April 6, 2019

- Permission granted October 21, 2019 by Cat Hallam to showcase her experience from April 2019:
 - “....thank you for asking in advance. Certainly, happy to see the information used in an educational context. Hope it helps the students & contextualises the subject matter.”

Cat Hallam: "Today, I simply wanted to renew my passport online."

3. Photo quality and format

Your photo must:

- be in colour, with no effects or filters
- not be blurred or have 'red eye'
- be unedited – you can't 'correct' your passport photo

Our automated check suggests

- it looks like your eyes are closed
- we can't find the outline of your head

You can use the photo

- if you have a medical or religious reason why it doesn't meet the rules
- if you think it meets all the rules

If your photo doesn't meet the rules you may have problems with your application or when you travel.

BETA This is a new service – your feedback will help us to improve it.

Back

Check your photo

1. Background and lighting

Your photo must have:

- a plain light-coloured background – without texture or pattern
- balanced light – no shadows on your face or behind you
- no objects behind you

2. Your appearance

Make sure:

- the photo is a good likeness taken in the last month
- your whole face is visible with your eyes open
- you have a plain expression – no smile and mouth closed
- there are no reflections or glare (if you have to wear glasses)
- you're not wearing headwear (unless for religious or medical reasons)

3. Photo quality and format

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Our automated check suggests

- we can't find the outline of your head

You can use the photo

- if you have a medical or religious reason why it doesn't meet the rules
- if you think it meets all the rules

If your photo doesn't meet the rules you may have problems with your application or when you travel.

Do you want to submit this photo?

☐ Yes, I want to submit it

☐ No, I want to get another photo

Continue

Your photo



<https://twitter.com/CatHallam1/status/1114590857397788673>

BETA This is a new service – your [feedback](#) will help us to improve it.

[Back](#)

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Do you want to submit this photo?

☐ Yes, I want to submit it

☐ No, I want to get another photo

Continue

Your photo



You need another photo

This photo has failed our automated checks for the following reasons:

✗ **It looks like your eyes are closed** 
You must keep your head straight and in the centre of the photo.

You can still submit your photo if you believe it should be accepted (eg there's a medical reason why you can't open your eyes).

✗ **Your photo quality is too low**
You need to use a photo that's between 50kb and 10mb 

✗ **It looks like your mouth is open** 
Sometimes this is caused by facial hair or shadows near your mouth. Please try different lighting.
You can still submit your photo if you believe it should be accepted (eg there's a medical reason why your mouth appears to be open).

Your photo

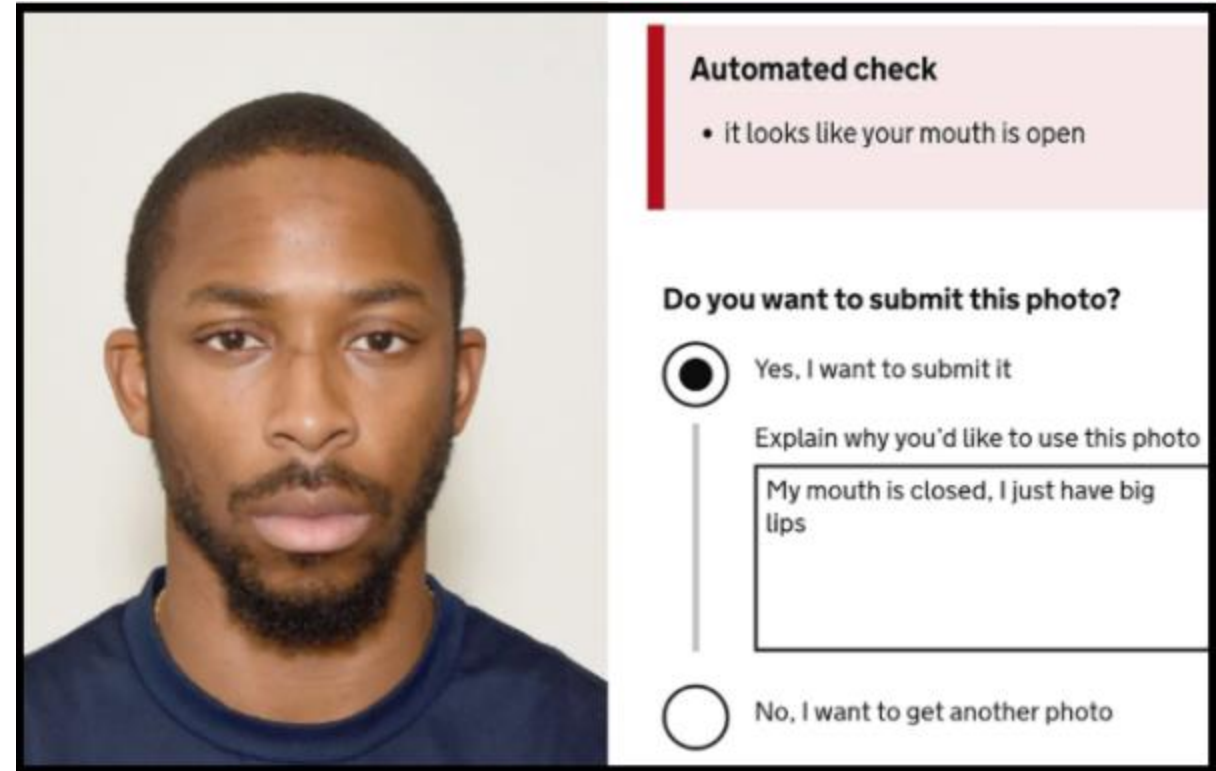


<https://twitter.com/CatHallam1/status/1114590857397788673>

Twitter @CatHallam1: April 6, 2019

- “After numerous attempts and changing my clothes several times, **this example illustrates why I regularly present on Artificial Intelligence/Machine Learning bias, equality, diversity and inclusion. #passport**”

“Black man is stunned after passport photo checker mistakes his lips for an open mouth as Home Office facial recognition system is accused of bias”



Automated check

- it looks like your mouth is open

Do you want to submit this photo?

☒ Yes, I want to submit it

Explain why you'd like to use this photo

My mouth is closed, I just have big lips

☐ No, I want to get another photo

<https://www.msn.com/en-gb/money/technology/black-man-is-stunned-after-passport-photo-checker-mistakes-his-lips-for-an-open-mouth-as-home-office-facial-recognition-system-is-accused-of-bias/ar-AAHx5on?li=AABMOzg>

2019: UK Home Office use of Facial Recognition

- “The UK government went ahead with a face-detection system for its passport photo checking service, despite knowing the technology failed to work well for people in some ethnic minorities.”
- “... was aware of problems with its website’s passport photo checking service, but decided to use it regardless”
- “User research was carried out with a wide range of ethnic groups and did identify that people with very light or very dark skin found it difficult to provide an acceptable passport photograph”

New Scientist: October 9, 2019:

<https://www.newscientist.com/article/2219284-uk-launched-passport-photo-checker-it-knew-would-fail-with-dark-skin/#ixzz62XKSWWcF>

2020: Met Police to roll out live facial recognition

- **BBC, 30 January 2020:**

- **“The Metropolitan Police has announced it will use live facial recognition cameras operationally for the first time on London streets.”**
- “The cameras will be in use for five to six hours at a time, with bespoke lists of suspects wanted for serious and violent crimes drawn up each time.”
- “An independent review of its use has shown that most matches produced by the cameras are false alarms.”
- “Privacy campaigners said it was a "serious threat to civil liberties".
- “Following earlier pilots in London and deployments by South Wales Police, the cameras are due to be put into action within a month.”
- “Police say they will warn local communities and consult with them in advance.”

From here: <https://www.bbc.co.uk/news/uk-51237665>

Purpose of Today

- How diverse do **AI** teams need to be to deliver *AI for majority good*?
- Diversity could lead to new biases
- New documentary *Coded Bias* presented at the 2020 Sundance Film Festival:

<https://www.wmm.com/sponsored-project/codedbias/>



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