

United Kingdom

*National AI Strategy*

The cornerstone for the development of AI policy in the UK is the 2017 independent AI review, *Growing the AI industry in the UK*, led by Professor Dame Wendy Hall and Jérôme Pesenti, and commissioned by the UK government to seek ways for growing the AI industry in the UK.<sup>1039</sup> Hall-Presenti recommended that the UK promote access to data in a wide range of sectors. In particular, the Report recommended the development of data trusts, as well as making more research data machine readable and “supporting text and data mining as a standard and essential tool for research.” Importantly, the authors discuss the development of skilled expertise on AI through industry-funded Master programs, credit-bearing AI online courses and opening PhD positions in AI at leading UK universities that should attract, among others, greater diversity in the AI workforce. Among the recommendations was also that the “Alan Turing Institute should become the national institute for artificial intelligence and data science,” acquiring a coordinating role country-wise; and an independent agency should promote uses of AI in the public sector.

Delivering on the recommendations of the Hall-Presenti report, the UK government published in 2018 their *Industrial Strategy: Artificial Intelligence Sector Deal*,<sup>1040</sup> and updated it in 2019.<sup>1041</sup> The AI Sector Deal aims to prepare the economy and society for the transformations brought by AI and to position the UK as a leader in developing AI technologies. The strategy is the first commitment from government and industry to realize AI’s potential, outlining a package of up to £0.95 billion of support for the

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<sup>1039</sup> Gov.UK, *Growing the artificial intelligence industry in the UK* (Oct 15, 2017) (the Hall-Presenti report) <https://www.gov.uk/government/publications/growing-the-artificial-intelligence-industry-in-the-uk>.

<sup>1040</sup> HM Government, *Industrial Strategy: Artificial Intelligence Sector Deal* [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/702810/180425\\_BEIS\\_AI\\_Sector\\_Deal\\_\\_4\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/702810/180425_BEIS_AI_Sector_Deal__4_.pdf)

<sup>1041</sup> Gov.UK, *AI Sector Deal* (May 21, 2019), <https://www.gov.uk/government/publications/artificial-intelligence-sector-deal/ai-sector-deal#:~:text=This%20Sector%20Deal%20is%20the,to%20%C2%A3342%20million%20from>

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sector. The Strategy focuses on improving UK's position in five key areas: 1) Ideas - the world's most innovative economy; 2) People - good jobs and greater earning power for all; 3) Infrastructure - a major upgrade to the UK's infrastructure; 4) Business environment - the best place to start and grow a business; and 5) Places - prosperous communities across the UK. The government's earmarked budget of £0.95 billion is supplemented with £1.7 billion stemming from the Industrial Strategy Challenge Fund.<sup>1042</sup> The OECD noted that, in the AI UK Sector Deal (2018-2027), "Priority areas include use of data and AI for prevention, early diagnosis and treatment of chronic diseases by the year 2030; using automation to do extreme jobs which endanger human life; and helping people develop the skills needed for the future jobs."<sup>1043</sup>

The UK also established the Office for Artificial Intelligence (OAI) to coordinate the implementation efforts set out in the AI Sector Deal.<sup>1044</sup> OAI also issued a guide to using artificial intelligence in the public sector,<sup>1045</sup> including Guidance on artificial intelligence ethics and safety.<sup>1046</sup>

Interestingly, the UK government has since 2018 set up yet another agency – the Centre for Data Ethics and Innovation (CDEI) to provide recommendations for a sustainable, safe, and ethical use of AI.<sup>1047</sup>

The CDEI is currently promoting AI-driven testing for Covid-19 and containing Covid-19 repository of local governments' "novel use-cases

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<sup>1042</sup> European Commission, *United Kingdom AI Strategy Report* (Feb. 2020), [https://knowledge4policy.ec.europa.eu/ai-watch/united-kingdom-ai-strategy-report\\_en](https://knowledge4policy.ec.europa.eu/ai-watch/united-kingdom-ai-strategy-report_en)

<sup>1043</sup> OECD G20 Digital Economy Task Force, *Examples of AI National Policies* (2020), <https://www.mcit.gov.sa/sites/default/files/examples-of-ai-national-policies.pdf>

<sup>1044</sup> Gov.UK, *UK Office for AI*, <https://www.gov.uk/government/organisations/office-for-artificial-intelligence>.

<sup>1045</sup> Gov.UK, *UK Guidance on Ethics and Safety* (June 10, 2019), <https://www.gov.uk/guidance/understanding-artificial-intelligence-ethics-and-safety>.

<sup>1046</sup> Gov.UK, *UK Guidance on Ethics and Safety* (June 10, 2019), <https://www.gov.uk/guidance/understanding-artificial-intelligence-ethics-and-safety>.

<sup>1047</sup> Gov.UK, *UK Centre for Data Ethics and Innovation*, <https://www.gov.uk/government/organisations/centre-for-data-ethics-and-innovation>.

of artificial intelligence and data specifically being used to counter and mitigate the effects of COVID-19 around the world. The current edition zooms in and identifies ways in which UK local authorities have used data-driven technology in their response to the pandemic.” Finally, a recent parliamentary hearing mentions the uptake of AI in public health where a potential is seen for the future. The expert testimonies also mention the fact that the UK is third in the global index on AI next to only the USA and China, revealing further UK’s ambitions to play an even bigger role on a global scale.

With respect to AI regulation and oversight, the Committee on Standards in Public Life concluded in a February 2020 report that the UK does not need a new AI regulator, but that all regulators must adapt to the challenges that AI poses to their sectors.<sup>1048</sup>

On 25 September 2020, the UK and the USA signed a joint Declaration on Cooperation in Artificial Intelligence Research and Development to establish a bilateral dialogue on their shared vision for driving technological breakthroughs in AI and to explore an AI R&D ecosystem that “promotes the mutual wellbeing, prosperity, and security of present and future generations.” The Declaration mentions, as one objective to protect “against efforts to adopt and apply these technologies in the service of authoritarianism and repression.”<sup>1049</sup>

### *Public Participation*

The guidance of the Information Commissioner’s Office, as well as all above-mentioned documents are publicly accessible. The ICO guidance sets space for online feedback that individuals and organizations may wish

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<sup>1048</sup> Gov.UK, Committee on Standards in Public Life, *Artificial Intelligence and Public Standards* (Feb. 2020), [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/868284/Web\\_Version\\_AI\\_and\\_Public\\_Standards.PDF](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/868284/Web_Version_AI_and_Public_Standards.PDF)

<sup>1049</sup> Gov.UK, OAI, *Declaration of the United States of America and the United Kingdom of Great Britain and Northern Ireland on Cooperation in AI Research and Development* (Sept. 25, 2020), <https://www.gov.uk/government/publications/declaration-of-the-united-states-of-america-and-the-united-kingdom-of-great-britain-and-northern-ireland-on-cooperation-in-ai-research-and-development/declaration-of-the-united-states-of-america-and-the-united-kingdom-of-great-britain-and-northern-ireland-on-cooperation-in-artificial-intelligence-re>

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to provide on how the guidance can be implemented in practice. Parliamentary hearings on AI are regularly being held, as mentioned above, and are accessible to watch online. One thing that is still not made public is the Roadmap on AI developed by the Office for Artificial Intelligence, summarizing the efforts of the government for the past 3 years across sectors and looking at milestones ahead; the Roadmap is expected to be published soon.

### *Facial Recognition*

Human rights organizations have long criticized the UK government for the almost unparalleled deployment of CCTV. (Chongqing, China has now overtaken London as the most surveilled city in the world.<sup>1050</sup>) Earlier this year, London's Met Police deployed live facial recognition. The Met says its use of the controversial technology will be targeted to "specific locations where intelligence suggests we are most likely to locate serious offenders."<sup>1051</sup> Silkie Carlo, the director of Big Brother Watch, called the move "an enormous expansion of the surveillance state and a serious threat to civil liberties in the UK". Noel Sharkey, a leading human rights campaigner, tweeted "FACE RECOGNITION - After 2yrs trials which an independent review showed 9% accuracy, the Met police start live facial recognition in London. This is a shameful disrespect of the British people & we know it's racially biased. STOP IT."<sup>1052</sup> Privacy International recently

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<sup>1050</sup> Matthew Keegan, *Big Brother is watching: Chinese city with 2.6m cameras is world's most heavily surveilled*, The Guardian (Dec. 2, 2019) <https://www.theguardian.com/cities/2019/dec/02/big-brother-is-watching-chinese-city-with-26m-cameras-is-worlds-most-heavily-surveilled>.

<sup>1051</sup> Vikram Dodd, *Met police to begin using live facial recognition cameras in London*, The Guardian (Jan. 24, 2020), <https://www.theguardian.com/technology/2020/jan/24/met-police-begin-using-live-facial-recognition-cameras>

<sup>1052</sup> @NoelSharkey (Jan. 24, 2020), <https://twitter.com/NoelSharkey/status/1220722848337211394>

urged regulatory authorities to investigate Facewatch, a company that specializes in facial recognition analysis and biometric watchlists.<sup>1053</sup>

*AI Grading Controversy*

A widely reported controversy over the use of AI in the UK public sector erupted in the Summer of 2020. The UK used an algorithm to estimate exam results. Nearly 40 percent of students saw their grades reduced after the government reevaluated exams, known as “A-levels.”<sup>1054</sup> The software model incorporated school’s past results and student’s earlier results on mock exams. The calculations favored elites.<sup>1055</sup> As the BBC explained, the algorithm “locks in all the advantages and disadvantages - and means that the talented outlier, such as the bright child in the low-achieving school, or the school that is rapidly improving, could be delivered an injustice.”<sup>1056</sup>

As the Open Data Institute pointed out, a student would have received a high grade in math only because historically someone from her school had received a high school although the same student was predicted at B or C.<sup>1057</sup> The new evaluation method was triggered by the corona virus since in-person exams had to be cancelled and the government sought to standardize college admissions. Wired UK reported that some researchers stated that “[r]ather than the algorithm getting it wrong, ... it was simply the

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<sup>1053</sup> Privacy International, *Authorities Must Act on Police Face Surveillance Network by the Backdoor* (Oct. 15, 2020), <https://privacyinternational.org/news-analysis/4218/authorities-must-act-police-face-surveillance-network-backdoor>

<sup>1054</sup> Adam Satariano, *British Grading Debacle Shows Pitfalls of Automating Government*, *New York Times* (Aug. 20, 2020) (“The uproar over an algorithm that lowered the grades of 40 percent of students is a sign of battles to come regarding the use of technology in public services.”), <https://www.nytimes.com/2020/08/20/world/europe/uk-england-grading-algorithm.html>

<sup>1055</sup> Karla Adams, *The UK used an algorithm to estimate exam results. The calculations favored elites*, *The Washington Post* (Aug. 17, 2020), <https://www.washingtonpost.com>

<sup>1056</sup> Sean Coughlan, *Why did the A-level algorithm say no?*, *BBC* (Aug. 14, 2020), <https://www.bbc.com/news/education-53787203>

<sup>1057</sup> Open Data Institute, *What can we learn from the qualifications fiasco? – The ODI* (Aug. 24, 2020), <https://theodi.org/article/what-can-we-learn-from-the-qualifications-fiasco/>

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wrong algorithm.”<sup>1058</sup> However, others thought that the application of Article 22 of the General Data Protection Regulation (prohibition of decisions solely made by automated decision making) was at stake, albeit disputed by the governmental agency that suggested the computer-generated score. Ultimately, protests in front of the British Parliament and a pending lawsuit led the government to withdraw the system.<sup>1059</sup>

Karen Hao, a reporter with MIT Technology Review, wrote “The problem began when the exam regulator lost sight of the ultimate goal—and pushed for standardization above all else.”<sup>1060</sup>

### *NGO Perspectives on AI in the UK*

NGO perspectives on the use of AI in the UK deal with the AI grading controversy but also with the automated process for settling the status of EU nationals post-Brexit. The application launched by the government to determine the status of EU nationals resident in the UK was based on automated face recognition and automated data matching across government departments. It displayed a number of errors including for example the denial of a settled status (granted after 5 years of residence) and thus the possibility to legally remain in the country of a French woman who had worked for 15 years in the UK and was married to a British national with two kids. Further, the data required by the app to determine the status of applicants did not include child benefits or child tax credits, and thus could be discriminatory towards women since 87% of child benefit recipients were female. Further, the algorithm used to determine visa applications known as 'the streaming tool' was found opaque and discriminatory toward applicants from certain nationalities and race groups. After a successful legal challenge, the government committed to a "redesign

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<sup>1058</sup> Matt Burgess, *The lessons we all must learn from the A-levels algorithm debacle*, WiredUK (Aug. 20, 2020) (“Unless action is taken, similar systems will suffer from the same mistakes. And the consequences could be dire”)

<https://www.wired.co.uk/article/gcse-results-alevels-algorithm-explained>

<sup>1059</sup> Daan Kolkman, “*F\*\*k the algorithm*”? : What the world can learn from the UK’s A-level grading fiasco, London School of Economic Blog (Aug. 26, 2020), <https://blogs.lse.ac.uk/impactofsocialsciences/2020/08/26/fk-the-algorithm-what-the-world-can-learn-from-the-uks-a-level-grading-fiasco/>

<sup>1060</sup> Karen Hao, *The UK exam debacle reminds us that algorithms can’t fix broken systems*, MIT Technology Review (Aug. 20, 2020), <https://www.technologyreview.com/2020/08/20/1007502/uk-exam-algorithm-cant-fix-broken-system/>

of the process and the way in which visa applications are allocated for decision-making."

*Global Partnership on AI and OECD AI Principles*

The UK is a member of the OECD and the G20 and therefore adheres to the OECD/G20 AI Principles. Having said that, it is interesting to observe that the OECD/G20 AI Principles are not referred to in the documents discussed above. The UK is one of the founding members of the GPAI.<sup>1061</sup>

*Data Protection*

In July 2020, the UK's Information Commissioner's Office (ICO), an independent governmental agency set up to "uphold information rights in the public interest" published guidance to clarify how to assess the risks to rights and freedoms that AI can pose from a data protection perspective; and the appropriate measures that can be implemented to mitigate them.<sup>1062</sup> The ICO is in effect the data protection watchdog of the UK set in accordance with the EU's Data Protection Directive as implemented by the UK, and later replaced with the General Data Protection Regulation (GDPA). The updated AI Guidance of the ICO states that it "aims to mitigate the risks specifically arising from a data protection perspective . . . without losing sight of the **benefits** such projects can deliver." The emphasis is thus on ensuring the fairness, transparency and lawfulness of AI projects but also on data security and public awareness. Familiar governance structures taken up from the data protection and privacy domain (such as accountability and impact assessments but also the idea of privacy by design) are exported to the field of AI. The well-known challenge of AI to data minimization is mentioned by the ICO, albeit in a somewhat cursory fashion.

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<sup>1061</sup> Gov.UK, *Joint statement from founding members of the Global Partnership on Artificial Intelligence* (June 15, 2020), <https://www.gov.uk/government/publications/joint-statement-from-founding-members-of-the-global-partnership-on-artificial-intelligence>.

<sup>1062</sup> UK ICO, *Guidance on AI and Data Protection* (July 30, 2020), <https://ico.org.uk/media/for-organisations/guide-to-data-protection/key-data-protection-themes/guidance-on-ai-and-data-protection-0-0.pdf>.

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### *Algorithmic Transparency*

The UK Data Protection Act 2018<sup>1063</sup> includes specific provisions on the right for individuals to intervene in automated decision-making.<sup>1064</sup> The concept of Algorithmic Transparency derived from UK's data protection framework is addressed in some detail in the updated AI Guidance published by the Information Commissioner's Office.

Transparency is mentioned, albeit only in passing, also in the AI Ethics & Safety Framework issued by the Office for Artificial Intelligence. As a part of OAI's recommendation on integrating "responsible innovation" into AI projects, the OAI advises that AI developers should "prioritise the transparency of how [they] design and implement [their] model, and the justification and interpretability of its decisions and behaviours."

At the end of November, the CDEI published the final report of its review into bias in algorithmic decision-making.<sup>1065</sup> The Center focused on the use of algorithms in significant decisions about individuals in four sectors (policing, local government, financial services and recruitment). Key recommendations include: 1) Government should place a **mandatory transparency obligation** on all public sector organisations using algorithms that have an impact on significant decisions affecting individuals; 2) **Organisations should be actively using data to identify and mitigate bias.** They should make sure that they understand the capabilities and limitations of algorithmic tools, and carefully consider how they will ensure fair treatment of individuals, and 3) Government should issue guidance that clarifies the **application of the Equality Act to algorithmic decision-making.** This should include guidance on the collection of data to measure bias, as well as the lawfulness of bias mitigation techniques (some of which risk introducing positive discrimination, which is illegal under the Equality Act).

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<sup>1063</sup> Legislation.gov.uk, *Data Protection Act 2018*,  
<https://www.legislation.gov.uk/ukpga/2018/12/contents/enacted>

<sup>1064</sup> Legislation.gov.uk, *Data Protection Act 2018* (Sect. 95 – "Right to intervene in automated decision-making"),  
<https://www.legislation.gov.uk/ukpga/2018/12/section/97/enacted>

<sup>1065</sup> Gov.UK, *CDEI publishes review into bias in algorithmic decision-making* (Nov. 27, 2020), <https://www.gov.uk/government/publications/cdei-publishes-review-into-bias-in-algorithmic-decision-making>



*Human Rights*

All UK AI initiatives need to comply with the UK Human Rights Act of 1998. To be sure, even post-Brexit the UK remains a part of the European Convention on Human Rights and is subject to the jurisdiction of the European Court of Human Rights in Strasbourg. Therefore, even if the GDPR can no longer be enforced in the UK through judgments of the Court of Justice of the European Union in Luxembourg, the existence of structures like the UK's Information Commissioner's Office and generally, the remnants of EU's *Acquis Communautaire* make it clear that the UK has in place a relatively robust system of human rights protection. Currently, the public debate is often about loss of jobs due to the growth of the robotics sector. Relatedly, in 2020 the Alan Turing Institute issued guidelines on AI and non-discrimination/human rights.

*Evaluation*

The UK has endorsed the OECD/G20 AI Principles, and has a good record on human rights. The UK has established several public bodies that have issued policies on AI, including the Office for Artificial Intelligence. Although the AI strategy is open and public participation is encouraged, the UK suffered a significant public backlash over the grading controversy in 2020. Laudable strategies such as the development of AI-related workforce and the growth of the education sector, as well as the promise of data trusts need to be monitored closely. There is, at the moment, no express support for the Universal Guidelines for AI or the Social Contract for the Age of AI.