COVID-19 Repository

May 2020

Centre for
Data Ethics
and Innovation

Centre for Data Ethics and Innovation

Contents

Centre for Data Ethics and Innovation

Overview

- **The repository is a database of new uses of data and artificial intelligence that have aims specifically for countering and mitigating the effects of COVID-19.**

- **We are focusing on archetypal applications of data and AI to solve specific issues, capturing key examples, and recognising that different implementations carry different benefits and risks.**

- **When we use the term “effects”, we are not just directly referring to the public health crisis. Rather, we are also speaking broadly to the consequences of lockdown measures, the need to support economic recovery, and the ability to improve future resilience.**

- **We strongly encourage anyone who has identified use-cases that we have missed to contact the team directly via the following email: c19-repository@culture.gov.uk**

Full Repository

				USE CASE				ADOPTION	
					Primary purpose				
N°	Month	Sector	Application of AI and data	Description and examples	Managing the immediate public health crisis	Supporting the public health response and mitigating the effects of lockdown	Building future resilience and aiding the recovery	Stage of development	New use case or pivot of existing activity
1	April	DIGITAL	**Use of AI to automate content moderation in the absence of human reviewers**	Online platforms are increasing their use of automated content moderation systems, as fewer human moderators are able to attend their workplaces. **Facebook** has said that for the foreseeable future it will stop using external contractors to moderate content, but will continue to allow some full-time employees to review the most sensitive content, and for them to attend the office in person. Separately, Facebook has said it will focus more on suicide and self-harm content, which it believes may become more prevalent as a result of stay-at-home measures. **YouTube** and **Twitter** have likewise announced that they will rely on AI to moderate content during the coronavirus pandemic. **YouTube** have said it will not be issuing 'strikes' to users, except in cases where they have a high degree of confidence that content violates its rules. The platform notes that users will be able to challenge automated content removal, but that the appeals process will take longer than usual.	X			In use now	Increase in existing activity

2	April	**DIGITAL**	**Use of smart speakers to provide health advice**	Smart speakers and voice assistants are being used to channel COVID-19 health advice to households. **Amazon's Alexa** prioritises official guidance, and has installed a new feature within Alexa that allows users to check their risk level to COVID-19 by giving information about their travel history and symptoms. **Apple** has reportedly done the same for its voice assistant, Siri. **Google's** Assistant is directing users to the World Health Organisation for COVID-19 guidance. Several new apps (or "skills") have also been created to run on smart speakers, for example one advising users on how to wash their hands thoroughly. However, it is understood that tech firms are removing several apps for spreading inaccurate information.	X			In use now	Increase in existing activity
3	April	**DIGITAL**	**Automating the detection of unfair pricing of goods on e-marketplaces**	E-commerce marketplaces are using algorithms to identify unfair pricing practices, including for medical goods such as hand sanitisers and face masks. A Wired investigation in February reported that a bestselling **Amazon** listing of face masks quadrupled in price in the space of several weeks. In response, **Amazon** has used automated systems to identify problematic sellers, suspending more than 3,900 accounts in their US store. It is unclear how many UK accounts have been suspended in the same way. **eBay** has similarly sought to use algorithms to identify unfair pricing, including by using filters to restrict the sale of masks and hand sanitiser products.	X	X		In use now	Increase in existing activity
4	April	**DIGITAL**	**Connecting volunteers and enabling community support on social media platforms**	Social media platforms are connecting their members to provide mutual support. **Facebook** recently launched Community Help, which allows people to request or offer help to their neighbours. This includes offering to pick up food, donating supplies, or volunteering to assist nearby businesses. Readers are notified how close they are to those posting messages, and can respond either publicly or privately. On a smaller scale, the platform **NextDoor** has introduced a new feature called Help Map, which allows users to add themselves to a map noting the errands they can help with.	X	X		In use now	New use case

5	April	**DIGITAL**	**Automating the removal of medical equipment adverts on social media**	Following concerns about shortages of medical equipment, social media and search engine platforms have begun to take down adverts featuring certain products, drawing on the automated systems at their disposal. **Facebook** (including **Instagram**) announced in March that it would be temporarily banning adverts for face masks, hand sanitiser, surface disinfecting wipes and COVID-19 testing kits. Facebook is also using automated systems to take down adverts for products that guarantee immunity from coronavirus. **Google** has similarly banned adverts for medical face masks, and said it will continue to evaluate whether this policy should apply to more products.	X			In use now	New use case
6	April	**DIGITAL**	**Identifying bots and spam accounts spreading disinformation**	Social media platforms are using automated systems to remove spam accounts that are spreading disinformation about coronavirus. **Facebook** is using AI to single out bots spreading false information on its **Whatsapp** messaging service. In April, **WhatsApp** said it would set a new limit on the number of people that messages could be forwarded to, in an attempt to put a brake on the circulation of disinformation. **Twitter** is similarly using automated systems to address spam profiles, claiming they have challenged more than 1.5 accounts that were demonstrating “spammy or manipulative behaviours”. Outside of social media, C19-related spam has been found in the comment sections of news and blog sites, which have been embedded with hyperlinks that direct readers to medical goods.	X			In use now	Increase in existing activity
7	April	**DIGITAL**	**Redirecting social media and search engine users to official health advice**	Many social media and search engine platforms are displaying official health advice prominently on their home pages, and/or redirecting users to verified content when they make searches related to coronavirus. These policies apply on **Twitter**, **Google**, **YouTube**, **Facebook**, **Snapchat**, **Pinterest**, and **TikTok**, among other platforms. In the UK, **Twitter** have worked with the Department for Health and Social Care to identify the trigger words people are likely to use when they are seeking C19-related information.	X			In use now	New use case

8	April	**DIGITAL**	**Use of blacklisting technology to prevent adverts appearing next to COVID-19 articles**	Digital advertisers are using “blacklist” technology to prevent their adverts being seen next to C19-related articles. The technology was created to help brands distance themselves from controversial or illicit content, such as pornography and articles containing extreme political views. It works by identifying key words in content, which act as red flags to advertising systems. Many newspapers claim that the use of blacklisting technology is depriving them of significant revenue, in spite of them seeing a sharp increase in internet traffic since lockdown measures were introduced. **Newsworks**, the campaigning body for the UK newspaper industry, estimates that news brands could lose £50m in lost revenue over the three months from April.	X			In use now	Increase in existing activity
9	April	**HEALTH AND SOCIAL CARE**	**Use of data infrastructure to track health equipment and other assets**	The **NHS** has been using a **data platform to** track the movement of staff and assets in real time. **Palantir** have been engaged to construct a data store (which excludes sensitive patient data) and accompanying dashboard, and is being used to track supply and demand across the health system.	X			In development (NHSx)	New use case (for NHS)
10	April	**HEALTH AND SOCIAL CARE**	**Making population and patient level data publicly available to aid COVID-19 research and decision-making**	**Google** have been hosting public datasets on the disease and other useful information such as OpenStreetMap data, and making it free to query through a COVID-19 Public Dataset Program. Some clinicians are also sharing anonymised patient registries, which detail how patients have responded to COVID-19 treatments and help researchers and doctors understand how efforts to treat the disease are developing. A collaborative effort by SADA, Google Cloud and HCA Healthcare in the United States has seen the launch of the National Response Portal (NRP), which aims to be a hub for medical professionals and policy-makers who need critical data for decision-making.	X	X		In use now (check)	New use case

11	April	**HEALTH AND SOCIAL CARE**	**Tracking population movements to aid public health interventions**	Several major tech platforms including **Google**, **Apple**, and **Facebook** have been publishing "mobility reports" containing aggregated location data they collect, that help public officials understand how busy certain types of places are. Other data platforms have been aggregating these types of data - eg **Unacast** have been using smartphone location data to assess how well different US states are adhering to social distancing measures. In the UK, mobile network O2 has been working with the government on a similar basis, using aggregated anonymised data only. Researchers from the Computer Science Department at the **University of Exeter** have teamed up with **Cubeiq** to create the 'Covid-19 UK Mobility Report'. "Cuebiq Inc. is a consumer insights company that analyzes visitation patterns based on aggregated and privacy-enhanced mobility data, to provide measurement, support academic research and humanitarian initiatives." To conduct the research, the Exeter team used Cubeiq's national scale dataset on human mobility to evaluate levels of adherence to public health restrictions in response to COVID-19. The research used data from anonymized users who provided access to their location data anonymously. The single users were not identifiable at any research steps. Residential areas were inferred at an aggregated local authority level. The analysis was performed on a sample 250k users across the UK. To establish a baseline, the team performed a radius of gyration analysis using the definition of (Gonzalez, M. et al Nature 2008). The mobility value of a given region is the median value of the distribution of the radius of gyration of the users within a temporal window of 8 days centred around a given day.	X			In use now	New use case (new deployment of data)
12	April	**HEALTH AND SOCIAL CARE**	**Using predictive analytics to predict the onset of a health epidemic or pandemic**	Some platforms such as **BlueDot** have been using algorithms to analyse news reports, government statements, and airline ticketing data from across the world to support epidemiologists in predicting the spread of the disease.	X		X	In use now	New use case

13	April	**HEALTH AND SOCIAL CARE**	**Using data-driven simulations to understand potential future epidemics and build resilience**	**Improbable** are using simulation of real-world environments and 'agent based modelling' to help understand how epidemics may spread in practice. They are assisting a Royal Society-based project in modelling potentially COVID-19 spread, but the technology is also discussed as having the potential to support resilience planning for future outbreaks. Similar, but less sophisticated individual-based modelling is also being use by Imperial College.	X			In use now	New use case
14	April	**HEALTH AND SOCIAL CARE**	**Using AI to improve COVID-19 diagnostic tools**	AI is being used to assist efforts to diagnose COVID-19 via medical scans. **Alibaba** and **DAMO Academy** use computed tomography scans of the chest to classify infections as coronavirus, the common flu, or other respiratory diseases. **Huawei** are working with Shenzhen University Hospital to accelerate diagnosis speeds from 14mins to 2mins using automatically generated reports and 3D analysis.	X			Some tools In use now, others likely to be in development	New use case
15	April	**HEALTH AND SOCIAL CARE**	**Web browser plug-ins that warn consumers of illicit healthcare products**	Some companies like **Vistalworks** are offering browser plugins that warn online shoppers if they are at risk of buying illicit healthcare products.	X			In use now	New use case

16	April	**HEALTH AND SOCIAL CARE**	**Use of AI to identify treatments and vaccinations for COVID-19**	**DeepMind** has been sharing findings of its AlphaFold model, which seeks to predict the COVID-19 virus's protein structure, a process that is very computationally expensive without AI. Understanding these structures helps scientists understand what treatments and vaccination approaches may be effective (eg in blocking the viral attachment protein). Similar technology has been used to predict what drugs may be effective for treatment, and narrow down the range of possibilities for real-world trials. **BenevolentAI** has pivoted its platform toward understanding the body's response to Coronavirus. They launched an investigation using their AI drug discovery platform to identify approved drugs which could potentially inhibit the progression of the novel coronavirus, finding that Baricitinib (a drug currently approved for rheumatoid arthritis, owned by Eli Lilly) proved the strongest candidate. Baricitinib is now in late-stage clinical trials with the US National Institute for Allergies and Infectious Diseases (NIAID) to investigate its efficacy and safety as a potential treatment for COVID-19 patients.	X		X	In use now	Increase in existing activity
17	April	**HEALTH AND SOCIAL CARE**	**Use of video chat devices within care homes**	**Facebook** has donated thousands of its 'Portal' video chat devices to the NHS, which are being distributed to care homes as part of a pilot to reduce loneliness. The devices are notable for including face-tracking technology and building in voice assistants such as Alexa or Facebook's own Portal assistant. This also represents a new deployment context for Portal devices, the published policies for which presently state "Portal may only be used for personal and non-commercial purposes at this time".		X		In use now	New use case (new context for deployment of existing tech)
18	April	**HEALTH AND SOCIAL CARE**	**Digital health certificates, in some instances implemented with facial verification**	Many countries are considering the possibility of implementing some form of digital health certificate that would enable people to prove they have recovered from COVID-19, and therefore be exempt from lockdown measures without the risk of spreading the virus. This could enable an increasing proportion of the workforce to safely return to work, and mitigate some of the economic impact of lockdown. **Onfido** have reportedly been discussing an implementation that would involve use of facial biometrics to drive in-person verification of health certificates / fitness to work status, similar to how verification works for online-only banks.	X	X	X	In early stages of scoping in the UK, some forms in use or close to introduction internationally.	New use case

19	April	**HEALTH AND SOCIAL CARE**	**Understanding longer term impact of disease on other health factors eg cardiovascular risk**	Several civil society and research bodies are beginning to examine uses of data and to examine the longer term health impacts of having had COVID-19 - for example, the **British Heart Foundation** is looking at any longer term effects of COVID-19 on cardiovascular risk.	X			Scoping	Pivot of existing activity
20	April	**HEALTH AND SOCIAL CARE**	**Risk Assessment and Patient Prioritisation**	Risk-scoring systems have been employed in some countries to help clinicians triage priority cases for medical intervention based on symptoms and severity.	X			In use	Increase in existing activity
21	April	**HEALTH AND SOCIAL CARE**	**Contact tracing apps**	Many countries are developing contact-tracing apps that typically use Bluetooth signals to track which devices have 'seen' each other, and therefore enable public health officials to inform individuals to self-isolate if they have been exposed to someone with the disease. Implementations vary, for example in their use of GPS data, and in terms of centralised or decentralised data collection, the latter of which are officially supported by major mobile platforms like **Apple** and **Google**.	X		X	In development in the UK; in use in other countries (inc,. China and South Korea)	New use case
22	April	**EMPLOYMENT**	**Automating social distance control in the workplace**	A number of companies have pivoted to creating wearable wristbands that alert users when they are within two metres of another individual. In Canada, three manufacturing veterans have co-founded **Social Distancer Technologies Inc**., to create (with the support of the National Research Council of Canada Industrial Research Assistance Program) a wearable product designed to provide workers with a means to easily maintain a safe two meter distance between one another. Another Canadian company, **Proxxi**, have created a wearable called "Halo", which vibrates to alert the wearer that they are within two metres of another			X	In use and in development	New use case

				wristband. Globally, **Samsung** have created a social distancing management solution for their business customers in the form of smartwatches with customisable protection, such as built-in heart rate monitors, motion sensors, and activity sensors.					
23	April	**EMPLOYMENT**	**Use of novel data sources to track economic activity**	Alternative sources of data are being used to gauge the impact of the pandemic on economic activity. This includes data about footfall, congestion, restaurant bookings and energy consumption. An economics professor at the University of Chicago has devised a new electricity-based measure to estimate production and consumption behaviour. Australian company **Kaspr Datahaus** has analysed the quality of internet connections to shed light on the health of different industries and economies, revealing for example when industry plants may have been taken offline. In China, **WeBank** have reportedly used AI and satellite imagery to identify indicators of an economic revival, such as the number of cars present in company parking lots.		X	X	In use now	New use case
24	April	**EMPLOYMENT**	**Identifying financially vulnerable locations and industries that will be hardest hit in a downturn**	New and longstanding data sources are being combined to identify vulnerable industries and places. The Australian company **Seer** has produced a financial vulnerability map that shows how regions vary by types of employment, homelessness, mortgage and rental stress, and social security payments, among other variables. The data included within the map is intended to help policymakers at a local and national level understand where they should be directing their resources.			X	In use now	Increase in existing activity
25	April	**CRIME & JUSTICE**	**Identifying adherence to social distancing in public and work spaces using image recognition on surveillance footage**	Landing.ai have begun marketing the capability to track individuals in spaces using computer vision layered on surveillance footage to identify when they are too close together. While the product is marketed for use in work spaces, the video shows footage from an Oxford high street, and has clear public space/policing applications. In similar developments, some developers have demonstrated image recognition applications that detect whether an individual is wearing a mask, which could be used to enforce any public health rules around mask-wearing in public, as some countries have begun to mandate. Clearview have proposed using similar technology in the US, using facial recognition to identify people in public spaces. In the UK, DfE's Data Science Lab is using pre-trained person counting neural	X	X	X	Marketed for current use	New use case

				network models to detect how many people are outside during the daytime in London in images from TfL's open data traffic cameras. DfT are using AI tools on camera imagery to estimate traffic flows and the extent to which pedestrians are complying with 2m distancing. Only aggregate data is used, no personal data or images are shared.					
26	April	**CRIME & JUSTICE**	**Drones enabled with AI-driven crowd detection and facial recognition**	**Skylark Labs** are providing computer vision-equipped drones to Indian police, that permit both facial recognition at close range, and identification of people who breached social distancing or curfew rules.	X	X		In use now	Pivot of existing activity
27	April	**TRANSPORT**	**Using AI to predict food shortages and redistribute supplies accordingly**	The **US Army** is using machine learning algorithms to predict food shortages across the country and prioritise distribution accordingly.		X		In use now	Increase in existing activity
28	April	**EMPLOYMENT**	**Increased use of algorithms that support recruitment eg sifting applications**	Some sectors have had to engage in mass recruitment during the lockdown to cope with increased demand for their services. Some organisations are turning to AI-based tools to help sift applications and process interviews at scale.		X		In use now	Increase in existing activity

29	April	**EMPLOYMENT**	**Use of monitoring software by employers on hardware in employee homes**	The Washington Post has reported a number of software platforms being employed (primarily in the US) to closely monitor employee behaviour on their work devices, and in some instances, mandating webcams and other monitoring devices be switched on throughout the working day.		X		In use now	Increase in existing activity
30	April	**EDUCATION**	**Algorithmic assessment and grade assignment using teacher-provided scoring**	DfE is working with **Ofqual** and the secondary education system to provide exam results for students based on teacher assessments of performance throughout the year, using some form of algorithm.		X		Under development	New use case
31	April	**EDUCATION**	**Sharing and aggregation of local authority data to enable better support of vulnerable children**	**LOTI and the GLA** are coordinating efforts for London local authorities to share data, and enable the provision of free school meal vouchers across authority boundaries.		X		In use now	New coordination of existing datasets

32	April	**ECONOMY**	**Use of new data sources to understand impact of lockdown measures**	The **ONS Data Science Campus** is exploring the impact of COVID-19 on UK society and the economy. They are exploring new data sources to strengthen the information they hold through surveys and other sources. The aim is to aprovide government with timely indicators of the impact of social distancing, the number of people in self-isolation, changes to trade in goods and the affect on businesses. One such data source is **Google's Mobility Reports,** which show the changing levels of people visiting different types of locations for areas around the UK and other countries. The data provides insight into the impact of social distancing measures, and are created with aggregated, anonymised data from users who have turned on the Location History setting (off by default). ONS have extracted the data from these reports for the UK and other countries and made these publicly available along with the code-base. This means users around the world can reuse the data in their work to support the COVID-19 response. A Python tool has been used to extract trend data from the graphs (available on Github). **ONS** are publishing weekly articles and statistical bulletins on the COVID-19 impact. Topics include self-employment, social impacts, economy and society, business impact, deaths, social relationships, support for vulnerable groups, age, health and upaid care, subnational data usage advice, household financial resilience, employment for parents, employment for over-70s, homeworking and the labour market. They're also publishing a 'coronavirus roundup' - an ad-hoc publication of data analytics on the following subjects: living situation, health deprivation, support for self-employed workers, social distancing, COVID-19 as cause of death, business impact of C19, people worries about C19, deaths involving C19 and user requested data.	X	X		In use now	New coordination of existing datasets

33	April	**HEALTH AND SOCIAL CARE**	**Integration of major tech platforms into public sector sector data collection, use, and decision making**	**NHSX** along with NHS England and Improvement are leveraging iskills from the wider NHS. Microsoft is supporting NHSX and NHS England's technical teams, who have built a backend data store on Microsoft's cloud platform, Azure, to bring multiple data sources into a single, secure location. Amazon Web Services (AWS) is helping to provide infrastructure and technologies that are enabling NHSX and its partners to quickly and securely launch the new COVID-19 response platform for critical public services. AWS has the highest score awarded by the NHS Data Security & Protection (DSP) Toolkit. Faculty has an existing partnership with NHSX and is now supporting the development and execution of the data response strategy. This includes developing dashboards, models and simulations to provide key central government decision-makers with a deeper level of information about the current and future coronavirus situation to help inform the response. Google: The NHS is exploring the use of tools in the G Suite family to allow the NHS to collect critical real-time information on hospital responses to Covid-19. Data collected would be aggregated operational data only such as hospital occupancy levels and A&E capacity (not identifiable patient data).	X		X	In use now	New coordination of existing datasets
34	April	**HEALTH AND SOCIAL CARE**	**Use of self-reported health data to track and understand COVID-19 symptoms**	Researchers from **KCL** and **St. Thomas' Hospitals**, with support from the health science company **ZOE**, created an app that allows UK users to self-report COVID-19 symptoms. This data, protected by GDPR and sent to KCL and the **NHS**. The aim is to identify high-risk areas in the UK, better understand COVID-19 symptoms, and improve disease spread. **Flusurvey** is a webtool (managed and monitored by **Public Health England**) designed to monitor trends of infectious diseases. Flusurvey was borne out of the swine flu pandemic (2009) by researchers at the London School of Hygiene and Tropical Medicine **LSHTM** as part of a European initiative to monitor influenza-like illness (ILI) activity. It has now been adapted to monitor a range of diseases including COVID-19. Any member of the UK public can register onto the platform to report symptoms. This data will be used by researchers at **PHE** and **LSHTM** to monitor UK disease trends. There are currently more than 8,000 people in the UK participating in the survey and the **Flu Like Illness Heatmap** is updated every three minutes. Flusurvey's C19-adapted platofrm	X			In use now	New use case

				monitors community prevalence and trend of symptoms by gatheringinformation that can provide useful insights on community transmission, exposure risk, changes in healthcare seeking behaviour and adherence to recommendations.					
35	May	**ECONOMY**	**Use of OTA (online travel agency) data to track COVID-19 impact on property rental markets**	**seetransparent.com** have collated data insights around occupancy, demand, pricing, supply and cancellations of short-term rental properties to track how COVID-19 is affecting global short-term rental markets globally. Their dashboard uses a variety of data visualistion methods to illustrate changes in Online Travel Agency (OTA) site traffic, stock prices, average length of stay and domestic / international travel behaviour. The site has also been optimised to promote recovery indicators such as countries anticipating a lift in travel bans / easing lockdown measures internally.			X	In use now	New coordination of existing datasets
36	May	**EDUCATION**	**Creation of VR apps to facilitalte virtual fieldtrips for teachers during lockdown (and beyond)**	**Treehouse by Trekview** offers a curriculum of virtual fieldtrips to assist teachers in delivering education in lockdown. Built from Trekview's repository of 360 degree images, VR apps have been deisgned to facilitate virtual exploration of areas of geographical interest and connect students with researchers. Trekview aims to use its platform to raise awareness of environmental issues, promote sustainable tourism, boost local economies, capture environments at risk of being lost, provide researchers with large data sets and deliver accurate information on the location of people and infrastructure in emergency situations.		X	X	In use now	Pivot of existing activity
37	May	**HEALTH AND SOCIAL CARE**	**Platform disseminating instructions for 3D printing PPE for local medical centres**	**PPEDash's** mission is to crowdsource citizen manufacturing of PPE/medical equipment from people with 3D printers. PPEDash provides online resources to create, sterilize, and deliver PPE and medical devices to their local medical facilities and provide an open-source marketplace of potential 3D equipment to print. The website provides both printing instructions, 3D files for free download and sterilization instructions prior to handoff. In the future PPEDash hopes to expand the platform to have a direct and seamless healthcare-to-maker messaging system.	X			In use now	New coordination of existing datasets
38	May	**CRIME & JUSTICE**	**Cameras that detect face masks to evaluate adherence to**	Everyone riding public transportation in France is required to wear a face mask. Paris and Cannes are using computer vision to count people who comply. **Datakalab**, a French AI startup, is installing chips in existing CCTV cameras that run an object			X	Being tested in Paris and Cannes, France.	New use case

			government mandates	recognition model. The model is trained to distinguish masked faces from unmasked ones.					
39	May	**HEALTH AND SOCIAL CARE**	**Crowd sourcing a vaccination for COVID-19**	**COVID Moonshot**, an international group of scientists in academia and industry, is crowdsourcing designs for molecules with potential to thwart the coronavirus. The project is using a deep learning platform to decide which to synthesize for testing. Any intellectual property it develops will be donated to the public domain.The group began in March as a partnership between PostEra, a UK-based startup, and Diamond Light Source, a British government science lab. PostEra issued a call for submissions of compounds that incorporate specific chemical fragments that bind to a protein the virus uses to replicate, as pictured above. It has received over 4,500 proposals so far.			X	In use	Pivot of existing activity
40	May	**HEALTH AND SOCIAL CARE**	**Machine learning enabled chatbots for contactless screening of COVID-19 symptoms and to answer questions from the public**	Clevy.io is a French start-up which has launched a chatbot to make it easier for people to find official government communications about COVID-19. Powered by real-time information from the French government and the World Health Organization, the chatbot assesses known symptoms and answers questions about government policies. With almost 3 million messages sent to-date, this chatbot is able to answer questions on everything from exercise to an evaluation of COVID-19 risks, without further straining the resources of healthcare and government institutions.	X			In use in French cities including Strasbourg, Orleans and Nanterre	Pivot of existing activity
41	May	**HEALTH AND SOCIAL CARE**	**Machine learning-enabled insights from research papers**	**AWS** have launched CORD-19 Search, a new search website powered by machine learning, that can help researchers quickly and easily search for papers and documents and answer questions like “When is the salivary viral load highest for COVID-19?” Built on the Allen Institute for AI’s CORD-19 open research dataset of more than 128,000 research papers and other materials, this machine learning solution can extract relevant medical information from unstructured text and delivers robust natural-language query capabilities, helping to accelerate the pace of discovery.	X		X	In use	New use case
42	May	**HEALTH AND SOCIAL CARE**	**Using machine learning to recognise patterns in**	**UC San Diego Health** has engineered a new method to diagnose pneumonia earlier, a condition associated with severe COVID-19. This early detection helps doctors quickly triage patients to the appropriate level of care even before a COVID-19 diagnosis is	X			In use	Increase in existing activity

			medical imaging	confirmed. Trained with 22,000 notations by human radiologists, the machine learning algorithm overlays x-rays with colour-coded maps that indicate pneumonia probability.					
43	May	**HEALTH AND SOCIAL CARE**	**Machine learning model to estimate the number of undetected COVID-19 cases**	Researchers at the **Chan Zuckerberg Biohub** in California have built a model to estimate the number of COVID-19 infections that go undetected and the consequences for public health, analyzing 12 regions across the globe. Using machine learning and partnering with the **AWS Diagnostic Development Initiative**, they have developed new methods to quantify undetected infections – analyzing how the virus mutates as it spreads through the population to infer how many transmissions have been missed.	X			In use	Pivot of existing activity
44	May	**HEALTH AND SOCIAL CARE**	**COVID-19 vulnerability index which identifies people most at risk of severe complications**	**Closed Loop** has developed and open-sourced a COVID vulnerability index, an AI-based predictive model that identifies people most at-risk of severe complications from COVID-19. This 'C-19 Index' is being used by healthcare systems, care management organizations and insurance companies to identify high-risk individuals, then calling them to share the importance of handwashing and social distancing, and also offering to deliver food, toilet paper, and other essential supplies so they can stay at home.	X			In use (Chicago and New York)	Pivot of existing activity
45	May	**HEALTH AND SOCIAL CARE**	**Shielding programme**	A large number of different public bodies in the UK, coordinated by **MHCLG**, used data to identify people vulnerable to COVID-19, and worked with partners across the UK economy to offer them priority services that would improve their ability to isolate.	X			In use	New use case

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Digital

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1	April	DIGITAL	**Use of AI to automate content moderation in the absence of human reviewers**	Online platforms are increasing their use of automated content moderation systems, as fewer human moderators are able to attend their workplaces. **Facebook** has said that for the foreseeable future it will stop using external contractors to moderate content, but will continue to allow some full-time employees to review the most sensitive content, and for them to attend the office in person. Separately, Facebook has said it will focus more on suicide and self-harm content, which it believes may become more prevalent as a result of stay-at-home measures. **YouTube** and **Twitter** have likewise announced that they will rely on AI to moderate content during the coronavirus pandemic. **YouTube** have said it will not be issuing 'strikes' to users, except in cases where they have a high degree of confidence that content violates its rules. The platform notes that users will be able to challenge automated content removal, but that the appeals process will take longer than usual.	X			In use now	Increase in existing activity

2	April	**DIGITAL**	**Use of smart speakers to provide health advice**	Smart speakers and voice assistants are being used to channel COVID-19 health advice to households. **Amazon's Alexa** prioritises official guidance, and has installed a new feature within Alexa that allows users to check their risk level to COVID-19 by giving information about their travel history and symptoms. **Apple** has reportedly done the same for its voice assistant, Siri. **Google's** Assistant is directing users to the World Health Organisation for COVID-19 guidance. Several new apps (or "skills") have also been created to run on smart speakers, for example one advising users on how to wash their hands thoroughly. However, it is understood that tech firms are removing several apps for spreading inaccurate information.	X			In use now	Increase in existing activity
3	April	**DIGITAL**	**Automating the detection of unfair pricing of goods on e-marketplaces**	E-commerce marketplaces are using algorithms to identify unfair pricing practices, including for medical goods such as hand sanitisers and face masks. A Wired investigation in February reported that a bestselling **Amazon** listing of face masks quadrupled in price in the space of several weeks. In response, **Amazon** has used automated systems to identify problematic sellers, suspending more than 3,900 accounts in their US store. It is unclear how many UK accounts have been suspended in the same way. **eBay** has similarly sought to use algorithms to identify unfair pricing, including by using filters to restrict the sale of masks and hand sanitiser products.	X	X		In use now	Increase in existing activity
4	April	**DIGITAL**	**Connecting volunteers and enabling community support on social media platforms**	Social media platforms are connecting their members to provide mutual support. **Facebook** recently launched Community Help, which allows people to request or offer help to their neighbours. This includes offering to pick up food, donating supplies, or volunteering to assist nearby businesses. Readers are notified how close they are to those posting messages, and can respond either publicly or privately. On a smaller scale, the platform **NextDoor** has introduced a new feature called Help Map, which allows users to add themselves to a map noting the errands they can help with.	X	X		In use now	New use case

5	April	**DIGITAL**	**Automating the removal of medical equipment adverts on social media**	Following concerns about shortages of medical equipment, social media and search engine platforms have begun to take down adverts featuring certain products, drawing on the automated systems at their disposal. **Facebook** (including **Instagram**) announced in March that it would be temporarily banning adverts for face masks, hand sanitiser, surface disinfecting wipes and COVID-19 testing kits. Facebook is also using automated systems to take down adverts for products that guarantee immunity from coronavirus. **Google** has similarly banned adverts for medical face masks, and said it will continue to evaluate whether this policy should apply to more products.	X			In use now	New use case
6	April	**DIGITAL**	**Identifying bots and spam accounts spreading disinformation**	Social media platforms are using automated systems to remove spam accounts that are spreading disinformation about coronavirus. **Facebook** is using AI to single out bots spreading false information on its **Whatsapp** messaging service. In April, **WhatsApp** said it would set a new limit on the number of people that messages could be forwarded to, in an attempt to put a brake on the circulation of disinformation. **Twitter** is similarly using automated systems to address spam profiles, claiming they have challenged more than 1.5 accounts that were demonstrating “spammy or manipulative behaviours”. Outside of social media, C19-related spam has been found in the comment sections of news and blog sites, which have been embedded with hyperlinks that direct readers to medical goods.	X			In use now	Increase in existing activity
7	April	**DIGITAL**	**Redirecting social media and search engine users to official health advice**	Many social media and search engine platforms are displaying official health advice prominently on their home pages, and/or redirecting users to verified content when they make searches related to coronavirus. These policies apply on **Twitter**, **Google**, **YouTube**, **Facebook**, **Snapchat**, **Pinterest**, and **TikTok**, among other platforms. In the UK, **Twitter** have worked with the Department for Health and Social Care to identify the trigger words people are likely to use when they are seeking C19-related information.	X			In use now	New use case

Centre for Data Ethics and Innovation

8	April	**DIGITAL**	**Use of blacklisting technology to prevent adverts appearing next to COVID-19 articles**	Digital advertisers are using “blacklist” technology to prevent their adverts being seen next to C19-related articles. The technology was created to help brands distance themselves from controversial or illicit content, such as pornography and articles containing extreme political views. It works by identifying key words in content, which act as red flags to advertising systems. Many newspapers claim that the use of blacklisting technology is depriving them of significant revenue, in spite of them seeing a sharp increase in internet traffic since lockdown measures were introduced. **Newsworks**, the campaigning body for the UK newspaper industry, estimates that news brands could lose £50m in lost revenue over the three months from April.	X			In use now	Increase in existing activity

Health & Social Care

				CASE				ADOPTION	
N°	Month	Sector	Application of AI and data	Description and examples	Primary purpose			Stage of development	New use case or pivot of existing activity
					Managing the immediate public health crisis	Supporting the public health response and mitigating the effects of lockdown	Building future resilience and aiding the recovery		
9	April	HEALTH AND SOCIAL CARE	**Use of data infrastructure to track health equipment and other assets**	The **NHS** has been using a **data platform to** track the movement of staff and assets in real time. **Palantir** have been engaged to construct a data store (which excludes sensitive patient data) and accompanying dashboard, and is being used to track supply and demand across the health system.	X			In development (NHSx)	New use case (for NHS)
10	April	HEALTH AND SOCIAL CARE	**Making population and patient level data publicly available to aid COVID-19 research and decision-making**	**Google** have been hosting public datasets on the disease and other useful information such as OpenStreetMap data, and making it free to query through a COVID-19 Public Dataset Program. Some clinicians are also sharing anonymised patient registries, which detail how patients have responded to COVID-19 treatments and help researchers and doctors understand how efforts to treat the disease are developing. A collaborative effort by SADA, Google Cloud and HCA Healthcare in the United States has seen the launch of the National Response Portal (NRP), which aims to be a hub for medical professionals and policy-makers who need critical data for decision-making.	X	X		In use now (check)	New use case

11	April	**HEALTH AND SOCIAL CARE**	**Tracking population movements to aid public health interventions**	Several major tech platforms including **Google**, **Apple**, and **Facebook** have been publishing "mobility reports" containing aggregated location data they collect, that help public officials understand how busy certain types of places are. Other data platforms have been aggregating these types of data - eg **Unacast** have been using smartphone location data to assess how well different US states are adhering to social distancing measures. In the UK, mobile network O2 has been working with the government on a similar basis, using aggregated anonymised data only. Researchers from the Computer Science Department at the **University of Exeter** have teamed up with **Cubeiq** to create the 'Covid-19 UK Mobility Report'. "Cuebiq Inc. is a consumer insights company that analyzes visitation patterns based on aggregated and privacy-enhanced mobility data, to provide measurement, support academic research and humanitarian initiatives." To conduct the research, the Exeter team used Cubeiq's national scale dataset on human mobility to evaluate levels of adherence to public health restrictions in response to COVID-19. The research used data from anonymized users who provided access to their location data anonymously. The single users were not identifiable at any research steps. Residential areas were inferred at an aggregated local authority level. The analysis was performed on a sample 250k users across the UK. To establish a baseline, the team performed a radius of gyration analysis using the definition of (Gonzalez, M. et al Nature 2008). The mobility value of a given region is the median value of the distribution of the radius of gyration of the users within a temporal window of 8 days centred around a given day.	X			In use now	New use case (new deployment of data)
12	April	**HEALTH AND SOCIAL CARE**	**Using predictive analytics to predict the onset of a health epidemic or pandemic**	Some platforms such as **BlueDot** have been using algorithms to analyse news reports, government statements, and airline ticketing data from across the world to support epidemiologists in predicting the spread of the disease.	X		X	In use now	New use case

13	April	**HEALTH AND SOCIAL CARE**	**Using data-driven simulations to understand potential future epidemics and build resilience**	**Improbable** are using simulation of real-world environments and 'agent based modelling' to help understand how epidemics may spread in practice. They are assisting a Royal Society-based project in modelling potentially COVID-19 spread, but the technology is also discussed as having the potential to support resilience planning for future outbreaks. Similar, but less sophisticated individual-based modelling is also being use by Imperial College.	X			In use now	New use case
14	April	**HEALTH AND SOCIAL CARE**	**Using AI to improve COVID-19 diagnostic tools**	AI is being used to assist efforts to diagnose COVID-19 via meidcal scans. **Alibaba** and **DAMO Academy** use computed tomography scans of the chest to classify infections as coronavirus, the common flu, or other respiratory diseases. **Huawei** are working with Shenzhen University Hospital to accelerate diagnosis speeds from 14mins to 2mins using automatically generated reports and 3D analysis.	X			Some tools In use now, others likely to be in development	New use case
15	April	**HEALTH AND SOCIAL CARE**	**Web browser plug-ins that warn consumers of illicit healthcare products**	Some companies like **Vistalworks** are offering browser plugins that warn online shoppers if they are at risk of buying illicit healthcare products.	X			In use now	New use case

16	April	**HEALTH AND SOCIAL CARE**	**Use of AI to identify treatments and vaccinations for COVID-19**	**DeepMind** has been sharing findings of its AlphaFold model, which seeks to predict the COVID-19 virus's protein structure, a process that is very computationally expensive without AI. Understanding these structures helps scientists understand what treatments and vaccination approaches may be effective (eg in blocking the viral attachment protein). **BenevolentAI** has pivoted its platform toward understanding the body's response to Coronavirus. They launched an investigation using their AI drug discovery platform to identify approved drugs which could potentially inhibit the progression of the novel coronavirus, finding that Baricitinib (a drug currently approved for rheumatoid arthritis, owned by Eli Lilly) proved the strongest candidate. Baricitinib is now in late-stage clinical trials with the US National Institute for Allergies and Infectious Diseases (NIAID) to investigate its efficacy and safety as a potential treatment for COVID-19 patients.	X		X	In use now	Increase in existing activity
17	April	**HEALTH AND SOCIAL CARE**	**Use of video chat devices within care homes**	**Facebook** has donated thousands of its 'Portal' video chat devices to the NHS, which are being distributed to care homes as part of a pilot to reduce loneliness. The devices are notable for including face-tracking technology and building in voice assistants such as Alexa or Facebook's own Portal assistant. This also represents a new deployment context for Portal devices, the published policies for which presently state "Portal may only be used for personal and non-commercial purposes at this time".		X		In use now	New use case (new context for deployment of existing tech)
18	April	**HEALTH AND SOCIAL CARE**	**Digital health certificates, in some instances implemented with facial verification**	Many countries are considering the possibility of implementing some form of digital health certificate that would enable people to prove they have recovered from COVID-19, and therefore be exempt from lockdown measures without the risk of spreading the virus. This could enable an increasing proportion of the workforce to safely return to work, and mitigate some of the economic impact of lockdown. **Onfido** have reportedly been discussing an implementation that would involve use of facial biometrics to drive in-person verification of health certificates / fitness to work status, similar to how verification works for online-only banks.	X	X	X	In early stages of scoping in the UK, some forms in use or close to introduction internationally .	New use case

19	April	**HEALTH AND SOCIAL CARE**	**Understanding longer term impact of disease on other health factors eg cardiovascular risk**	Several civil society and research bodies are beginning to examine uses of data and to examine the longer term health impacts of having had COVID-19 - for example, the **British Heart Foundation** is looking at any longer term effects of COVID-19 on cardiovascular risk.	X			Scoping	Pivot of existing activity
20	April	**HEALTH AND SOCIAL CARE**	**Risk Assessment and Patient Prioritisation**	Risk-scoring systems have been employed in some countries to help clinicians triage priority cases for medical intervention based on symptoms and severity.	X			In use	Increase in existing activity
21	April	**HEALTH AND SOCIAL CARE**	**Contact tracing apps**	Many countries are developing contact-tracing apps that typically use Bluetooth signals to track which devices have 'seen' each other, and therefore enable public health officials to inform individuals to self-isolate if they have been exposed to someone with the disease. Implementations vary, for example in their use of GPS data, and in terms of centralised or decentralised data collection, the latter of which are officially supported by major mobile platforms like **Apple** and **Google**.	X		X	In development in the UK; in use in other countries (inc,. China and South Korea)	New use case
33	April	**HEALTH AND SOCIAL CARE**	**Integration of major tech platforms into public sector sector data collection, use, and decision making**	**NHSX** along with NHS England and Improvement are leveraging iskills from the wider NHS. Microsoft is supporting NHSX and NHS England's technical teams, who have built a backend data store on Microsoft's cloud platform, Azure, to bring multiple data sources into a single, secure location. Amazon Web Services (AWS) is helping to provide infrastructure and technologies that are enabling NHSX and its partners to quickly and securely launch the new COVID-19 response platform for critical public services. AWS has the highest score awarded by the NHS Data Security & Protection (DSP) Toolkit. Faculty has an existing partnership with NHSX and is now supporting the development and execution of the data response strategy. This includes developing dashboards, models and	X		X	In use now	New coordination of existing datasets

				simulations to provide key central government decision-makers with a deeper level of information about the current and future coronavirus situation to help inform the response. Google: The NHS is exploring the use of tools in the G Suite family to allow the NHS to collect critical real-time information on hospital responses to Covid-19. Data collected would be aggregated operational data only such as hospital occupancy levels and A&E capacity (not identifiable patient data).					
34	April	**HEALTH AND SOCIAL CARE**	**Use of self-reported health data to track and understand COVID-19 symptoms**	Researchers from **KCL** and **St. Thomas' Hospitals**, with support from the health science company **ZOE**, created an app that allows UK users to self-report COVID-19 symptoms. This data, protected by GDPR and sent to KCL and the **NHS**. The aim is to identify high-risk areas in the UK, better understand COVID-19 symptoms, and improve disease spread. **Flusurvey** is a webtool (managed and monitored by **Public Health England**) designed to monitor trends of infectious diseases. Flusurvey was borne out of the swine flu pandemic (2009) by researchers at the London School of Hygiene and Tropical Medicine **LSHTM** as part of a European initiative to monitor influenza-like illness (ILI) activity. It has now been adapted to monitor a range of diseases including COVID-19. Any member of the UK public can register onto the platform to report symptoms. This data will be used by researchers at **PHE** and **LSHTM** to monitor UK disease trends. There are currently more than 8,000 people in the UK participating in the survey and the **Flu Like Illness Heatmap** is updated every three minutes. Flusurvey's C19-adapted platform monitors community prevalence and trend of symptoms by gathering information that can provide useful insights on community transmission, exposure risk, changes in healthcare seeking behaviour and adherence to recommendations.	X			In use now	New use case
37	May	**HEALTH AND SOCIAL CARE**	**Platform disseminating instructions for 3D printing PPE for local medical centres**	**PPEDash's** mission is to crowdsource citizen manufacturing of PPE/medical equipment from people with 3D printers. PPEDash provides online resources to create, sterilize, and deliver PPE and medical devices to their local medical facilities and provide an open-source marketplace of potential 3D equipment to print. The website provides both printing instructions, 3D files for free download and sterilization instructions prior to handoff. In the future PPEDash hopes to expand the platform to have a direct and seamless healthcare-to-maker messaging system.	X			In use now	New coordination of existing datasets

39	May	**HEALTH AND SOCIAL CARE**	**Crowdsourcing a vaccination for COVID-19**	**COVID Moonshot**, an international group of scientists in academia and industry, is crowdsourcing designs for molecules with potential to thwart the coronavirus. The project is using a deep learning platform to decide which to synthesize for testing. Any intellectual property it develops will be donated to the public domain.The group began in March as a partnership between PostEra, a UK-based startup, and Diamond Light Source, a British government science lab. PostEra issued a call for submissions of compounds that incorporate specific chemical fragments that bind to a protein the virus uses to replicate. It has received over 4,500 proposals so far.			X	In use	Pivot of existing activity
40	May	**HEALTH AND SOCIAL CARE**	**Machine learning-enabled chatbots for contactless screening of COVID-19 symptoms and to answer questions from the public**	**Clevy.io** is a French start-up which has launched a chatbot to make it easier for people to find official government communications about COVID-19. Powered by real-time information from the French government and the World Health Organization, the chatbot assesses known symptoms and answers questions about government policies. With almost 3 million messages sent to-date, this chatbot is able to answer questions on everything from exercise to an evaluation of COVID-19 risks, without further straining the resources of healthcare and government institutions.	X			In use in French cities including Strasbourg, Orleans and Nanterre	Pivot of existing activity
41	May	**HEALTH AND SOCIAL CARE**	**Machine learning-enabled insights from research papers**	**AWS** have launched CORD-19 Search, a new search website powered by machine learning, that can help researchers quickly and easily search for papers and documents and answer questions like “When is the salivary viral load highest for COVID-19?” Built on the Allen Institute for AI’s CORD-19 open research dataset of more than 128,000 research papers and other materials, this machine learning solution can extract relevant medical information from unstructured text and delivers robust natural-language query capabilities, helping to accelerate the pace of discovery.	X		X	In use	New use case
42	May	**HEALTH AND SOCIAL CARE**	**Using machine learning to recognise patterns in medical imaging**	**UC San Diego Health** has engineered a new method to diagnose pneumonia earlier, a condition associated with severe COVID-19. This early detection helps doctors quickly triage patients to the appropriate level of care even before a COVID-19 diagnosis is confirmed. Trained with 22,000 notations by human radiologists, the machine learning algorithm overlays x-rays with colour-coded maps that indicate pneumonia probability.	X			In use	Increase in existing activity

43	May	**HEALTH AND SOCIAL CARE**	**Machine learning model to estimate the number of undetected COVID-19 cases**	Researchers at the **Chan Zuckerberg Biohub** in California have built a model to estimate the number of COVID-19 infections that go undetected and the consequences for public health, analyzing 12 regions across the globe. Using machine learning and partnering with the **AWS Diagnostic Development Initiative**, they have developed new methods to quantify undetected infections – analyzing how the virus mutates as it spreads through the population to infer how many transmissions have been missed.	X			In use	Pivot of existing activity
44	May	**HEALTH AND SOCIAL CARE**	**COVID-19 vulnerability index which identifies people most at risk of severe complications**	**Closed Loop** has developed and open-sourced a COVID vulnerability index, an AI-based predictive model that identifies people most at-risk of severe complications from COVID-19. This 'C-19 Index' is being used by healthcare systems, care management organizations and insurance companies to identify high-risk individuals, then calling them to share the importance of handwashing and social distancing, and also offering to deliver food, toilet paper, and other essential supplies so they can stay at home.	X			In use (Chicago and New York)	Pivot of existing activity
45	May	**HEALTH AND SOCIAL CARE**	**Shielding programme**	A large number of different public bodies in the UK, coordinated by **MHCLG**, used data to identify people vulnerable to COVID-19, and worked with partners across the UK economy to offer them priority services that would improve their ability to isolate.	X			In use	New use case

Crime & Justice

				USE CASE				ADOPTION	
N°	Month	Sector	Application of AI and data	Description and examples	Primary purpose			Stage of development	New use case or pivot of existing activity
					Managing the immediate public health crisis	Supporting the public health response and mitigating the effects of lockdown	Building future resilience and aiding the recovery		
25	April	**CRIME & JUSTICE**	**Identifying adherence to social distancing in public and work spaces using image recognition on surveillance footage**	Landing.ai have begun marketing the capability to track individuals in spaces using computer vision layered on surveillance footage to identify when they are too close together. While the product is marketed for use in work spaces, the video shows footage from an Oxford high street, and has clear public space/policing applications. In similar developments, some developers have demonstrated image recognition applications that detect whether an individual is wearing a mask, which could be used to enforce any public health rules around mask-wearing in public, as some countries have begun to mandate. **Clearview** have proposed using similar technology in the US, using facial recognition to identify people in public spaces. In the UK, **DfE's Data Science Lab** is using pre-trained person counting neural network models to detect how many people are outside during the daytime in London in images from TfL's open data traffic cameras. DfT are using AI tools on camera imagery to estimate traffic flows and the extent to which pedestrians are complying with 2m distancing. Only aggregate data is used, no personal data or images are shared.	X	X	X	Marketed for current use	New use case

26	April	**CRIME & JUSTICE**	**Drones enabled with AI-driven crowd detection and facial recognition**	**Skylark Labs** are providing computer vision-equipped drones to Indian police, that permit both facial recognition at close range, and identification of people who breached social distancing or curfew rules.	X	X		In use now	Pivot of existing activity

38	May	**CRIME & JUSTICE**	**Cameras that detect face masks to evaluate adherence to government mandates**	Everyone riding public transportation in France is required to wear a face mask. Paris and Cannes are using computer vision to count people who comply. **Datakalab**, a French AI startup, is installing chips in existing CCTV cameras that run an object recognition model. The model is trained to distinguish masked faces from unmasked ones.			X	Being tested in Paris and Cannes, France.	New use case

Education

				USE CASE				ADOPTION	
					Primary purpose				
N°	Month	Sector	Application of AI and data	Description and examples	Managing the immediate public health crisis	Supporting the public health response and mitigating the effects of lockdown	Building future resilience and aiding the recovery	Stage of development	New use case or pivot of existing activity
30	April	**EDUCATION**	**Algorithmic assessment and grade assignment using teacher-provided scoring**	DfE is working with **Ofqual** and the secondary education system to provide exam results for students based on teacher assessments of performance throughout the year, using some form of algorithm.		X		Under development	New use case
31	April	**EDUCATION**	**Sharing and aggregation of local authority data to enable better support of vulnerable children**	**LOTI and the GLA** are coordinating efforts for London local authorities to share data, and enable the provision of free school meal vouchers across authority boundaries.		X		In use now	New coordination of existing datasets

36	May	**EDUCATION**	**Creation of VR apps to facilitate virtual field trips for teachers during lockdown (and beyond)**	**Treehouse by Trekview** offers a curriculum of virtual field trips to assist teachers in delivering education in lockdown. Built from Trekview's repository of 360 degree images, VR apps have been designed to facilitate virtual exploration of areas of geographical interest and connect students with researchers. Trekview aims to use its platform to raise awareness of environmental issues, promote sustainable tourism, boost local economies, capture environments at risk of being lost, provide researchers with large data sets and deliver accurate information on the location of people and infrastructure in emergency situations.		X	X	In use now	Pivot of existing activity

Employment

				USE CASE				ADOPTION	
					Primary purpose				
N°	Month	Sector	Application of AI and data	Description and examples	Managing the immediate public health crisis	Supporting the public health response and mitigating the effects of lockdown	Building future resilience and aiding the recovery	Stage of development	New use case or pivot of existing activity
22	April	EMPLOYMENT	Automating social distance control in the workplace	A number of companies have pivoted to creating wearable wristbands that alert users when they are within two metres of another indiivdual. In Canada, three manufacturing veterans have co-founded **Social Distancer Technologies Inc**., to create (with the support of the National Research Council of Canada Industrial Research Assistance Program) a wearable product designed to provide workers with a means to easily maintain a safe two meter distance between one another. Another Canadian company, **Proxxi**, have created a wearable called "Halo", which vibrates to alert the wearer that they are within two metres of another wristband. Globally, **Samsung** have created a social distancing management solution for their business customers in the form of smartwatches with customisable protection, such as built-in heart rate monitors, motion sensors, and activity sensors.			X	In use and in development	New use case

23	April	**EMPLOYMENT**	**Use of novel data sources to track economic activity**	Alternative sources of data are being used to gauge the impact of the pandemic on economic activity. This includes data about footfall, congestion, restaurant bookings and energy consumption. An economics professor at the University of Chicago has devised a new electricity-based measure to estimate production and consumption behaviour. Australian company **Kaspr Datahaus** has analysed the quality of internet connections to shed light on the health of different industries and economies, revealing for example when industry plants may have been taken offline. In China, **WeBank** have reportedly used AI and satellite imagery to identify indicators of an economic revival, such as the number of cars present in company parking lots.		X	X	In use now	New use case
24	April	**EMPLOYMENT**	**Identifying financially vulnerable locations and industries that will be hardest hit in a downturn**	New and longstanding data sources are being combined to identify vulnerable industries and places. The Australian company **Seer** has produced a financial vulnerability map that shows how regions vary by types of employment, homelessness, mortgage and rental stress, and social security payments, among other variables. The data included within the map is intended to help policymakers at a local and national level understand where they should be directing their resources.			X	In use now	Increase in existing activity
28	April	**EMPLOYMENT**	**Increased use of algorithms that support recruitment eg sifting applications**	Some sectors have had to engage in mass recruitment during the lockdown to cope with increased demand for their services. Some organisations are turning to AI-based tools to help sift applications and process interviews at scale.		X		In use now	Increase in existing activity

29	April	**EMPLOYMENT**	**Use of monitoring software by employers on hardware in employee homes**	The Washington Post has reported a number of software platforms being employed (primarily in the US) to closely monitor employee behaviour on their work devices, and in some instances, mandating webcams and other monitoring devices be switched on throughout the working day.		X		In use now	Increase in existing activity

Economy

				USE CASE				ADOPTION	
					Primary purpose				
N°	Month	Sector	Application of AI and data	Description and examples	Managing the immediate public health crisis	Supporting the public health response and mitigating the effects of lockdown	Building future resilience and aiding the recovery	Stage of development	New use case or pivot of existing activity
32	April	ECONOMY	**Use of new data sources to understand impact of lockdown measures**	The **ONS Data Science Campus** is exploring the impact of COVID-19 on UK society and the economy. They are exploring new data sources to strengthen the information they hold through surveys and other sources. The aim is to aprovide government with timely indicators of the impact of social distancing, the number of people in self-isolation, changes to trade in goods and the affect on businesses. One such data source is **Google's Mobility Reports,** which show the changing levels of people visiting different types of locations for areas around the UK and other countries. The data provides insight into the impact of social distancing measures, and are created with aggregated, anonymised data from users who have turned on the Location History setting (off by default). ONS have extracted the data from these reports for the UK and other countries and made these publicly available along with the code-base. This means users around the world can reuse the data in their work to support the COVID-19 response. A Python tool has been used to extract trend data from the graphs (available on Github). **ONS** are publishing weekly articles and statistical bulletins on the COVID-19 impact. Topics include self-employment, social impacts, economy and society, business impact, deaths, social relationships, support for vulnerable groups, age, health and upaid care, subnational data usage advice, household financial resilience, employment for parents, employment for over-70s, homeworking and the labour market. They're also publishing a 'coronavirus roundup' - an ad-hoc	X	X		In use now	New coordination of existing datasets

				publication of data analytics on the following subjects: living situation, health deprivation, support for self-employed workers, social distancing, COVID-19 as cause of death, business impact of C19, people worries about C19, deaths involving C19 and user requested data.					
35	May	**ECONOMY**	**Use of OTA (online travel agency) data to track COVID-19 impact on property rental markets**	**seetransparent.com** have collated data insights around occupancy, demand, pricing, supply and cancellations of short-term rental properties to track how COVID-19 is affecting global short-term rental markets globally. Their dashboard uses a variety of data visualistion methods to illustrate changes in Online Travel Agency (OTA) site traffic, stock prices, average length of stay and domestic / international travel behaviour. The site has also been optimised to promote recovery indicators such as countries anticipating a lift in travel bans / easing lockdown measures internally.			X	In use now	New coordination of existing datasets

Transport

				USE CASE			
N°	**Month**	**Sector**	**Application of AI and data**	**Description and examples**	**Primary purpose**		
					Managing the immediate public health crisis	**Supporting the public health response and mitigating the effects of lockdown**	**Building future resilience and aiding the recovery**
27	April	**TRANSPORT**	**Using AI to predict food shortages and redistribute supplies accordingly**	The **US Army** is using machine learning algorithms to predict food shortages across the country and prioritise distribution accordingly.		X	