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Singapore

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Trends

Artificial intelligence ("AI"), big data and machine learning have been the subject of tremendous interest in Singapore in recent years. Advances in mobile computing and increasingly widespread internet and social media usage, amongst other factors, have contributed to the availability of large volumes of data, which are increasingly being analysed by machine-learning algorithms to make predictions or decisions.

AI has been identified by the Government as one of the four frontier technologies that are essential to growing Singapore's digital economy, alongside cybersecurity, immersive media and the Internet of Things.[1] In 2019, the Government launched a National Artificial Intelligence Strategy, aiming to establish Singapore as a leader in developing and deploying scalable, impactful AI solutions, in sectors that are highly valuable and pertinent to both citizens and businesses by 2030.[2] There will be an initial tranche of five "National AI Projects" in the high socio-economic impact sectors of border security, logistics, healthcare, education management and estate management.

Recent key initiatives to build Singapore's AI capabilities include:

(a) the 2017 launch of AI Singapore, a National AI programme which aims to enhance Singapore's AI capabilities, nurture local talent and build an ecosystem of AI start-ups and companies developing AI products. Its activities include seeding and providing support for AI research, accelerating the adoption of AI by Singapore-based organisations, and developing talent in the field;

(b) the formation of the Advisory Council on the Ethical Use of AI and Data, chaired by former Attorney-General V K Rajah SC, to tackle ethical questions raised by the growing use of AI, in order to develop a trusted AI ecosystem. The 11 council members are drawn from a range of backgrounds and comprise international and local technological companies, corporate users of AI and advocates of social and consumer interests;

(c) the provision of Government grants and incentives, such as the AI and Data Analytics ("AIDA") Grant offered by the Monetary Authority of Singapore ("MAS"), which aims to promote the adoption and integration of AIDA in financial institutions; and

(d) the creation of the AI Apprenticeship Programme to enlarge the pool of AI engineers. As of October 2022, over 200 apprentices have been trained, and the Government is providing an additional US$50 million to double the number of AI apprenticeships in the next five years.[3]

Various governmental and regulatory agencies have also issued policy papers setting out their views on matters relating to AI and big data, and have invited stakeholder feedback on certain policy issues and proposals by way of consultation exercises. Recent examples include:

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(a) the Personal Data Protection Commission's ("PDPC") Model Artificial Intelligence Governance Framework ("Model AI Framework"). The Model AI Framework is the first in Asia and is intended to provide detailed and readily implementable guidance to private sector organisations for the purpose of addressing key ethical and governance issues that may arise from their deployment of AI solutions;
(b) a research paper titled "*Data: Engine for Growth – Implications for Competition Law, Personal Data Protection, and Intellectual Property Rights*", published by the Competition & Consumer Commission of Singapore ("CCCS", formerly the Competition Commission of Singapore) in collaboration with the Intellectual Property Office of Singapore ("IPOS");
(c) The "Principles to Promote Fairness, Ethics, Accountability and Transparency ("FEAT") in the Use of Artificial Intelligence and Data Analytics in Singapore's Financial Sector", issued by MAS, provide a set of generally accepted principles for the use of AI and data analytics in decision-making related to providing financial products and services; and
(d) MAS's Veritas Initiative, which will enable financial institutions to evaluate their AIDA solutions against the FEAT principles (for example, through white papers detailing assessment methodologies and the open-source toolkit released by the Veritas Consortium).

Internationally, Singapore has also entered into agreements with other nations[4] to strengthen and develop AI research and collaboration efforts. Most recently, in February 2023, Singapore and the EU signed a Digital Partnership, which includes enhancing AI research and promoting cooperation with respect to regulating AI systems.[5]

The Singapore courts have also had the opportunity to address issues raised by AI in the context of cryptocurrency. In the case of *B2C2 Ltd v Quoine Pte Ltd* [2019] 4 SLR 17 ("*B2C2 v Quoine*"), the Singapore International Commercial Court ("SICC") had to determine the appropriate application of legal principles to a cryptocurrency exchange where trading was conducted via an algorithmic system as opposed to direct human action.

The algorithmic program in *B2C2 v Quoine* was found by the SICC to be "deterministic" in nature, with "no mind of [its] own", but "[a] mere machine […] carrying out actions which in another age would have been carried out by a suitably trained human". However, the SICC (per Simon Thorley IJ) opined that the ascertainment of knowledge in cases where computers have replaced human action will develop in the future as disputes arise as a result of such action, particularly in cases where the computer in question is "creating artificial intelligence" and can be said to have "a mind of its own" (*B2C2 v Quoine* at [206] to [209]). This was affirmed by the majority of the Court of Appeal on appeal, in *Quoine Pte Ltd v B2C2 Ltd* [2020] SGCA(I) 02.

Ownership/protection

The Singapore Government has sought to facilitate the protection of intellectual property ("IP") rights in AI technologies, in order to support innovative enterprises in bringing their AI products to market faster.

On 4 May 2020, IPOS launched the SG Patent Fast Track Pilot Programme, which was subsequently renamed as the "SG IP FAST" programme upon its expansion to include trademark and registered design applications. The programme will be in operation until 30 April 2024. As an example of its accelerated timelines, patent applications under this programme in all fields of technology can be granted in as fast as six months, compared to the typical period of at least two years.

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Notably, when submitting the SG IP FAST application, applicants must state the reason(s) for requesting such acceleration and the field of technology to which their invention relates.[6] One possible justification is that the patent application is for an emerging technology with a short product lifecycle (e.g., FinTech, Industry 4.0 and AI).

Under section 13 of the Patents Act 1994, for an invention to be patentable, it must satisfy three conditions:

(a) the invention must be new;
(b) involve an inventive step; and
(c) be capable of industrial application.

Companies considering the possibility of patent protection for AI inventions may wish to note that potential issues may arise in light of the principle that a mathematical method *per se* is not a patentable invention. In this regard, IPOS stated in its IP and Artificial Intelligence Information Note that not all inventions are eligible for patent protection (even if they meet the three key criteria above). For instance, mathematical methods, i.e., algorithms *per se*, are not considered inventions, and solving a generic problem such as using the method in controlling a system is unlikely to cross the threshold.

That said, IPOS also stated in its IP and Artificial Intelligence Information Note that where the patent application relates to the application of a machine learning method to solve a specific problem in a manner that goes beyond the underlying mathematical method, the application could be regarded as an invention (for example, using the method in controlling the navigation of an autonomous vehicle).

Apart from the protection of AI solutions under patent law, the source code of a computer program may also be protected by copyright. Section 13(1)(*b*) of the Copyright Act 2021 expressly provides that "literary work" includes a "computer program" for the purposes of the Copyright Act 2021.

In the context of AI, a couple of further issues may become increasingly relevant. These are: (i) rights in relation to data; and (ii) rights in relation to works generated by AI.

Protection of data under IP laws

The ability of IP laws to protect data may become an increasingly relevant issue in cases involving analytical applications or algorithms that derive their value from the underlying datasets.

In general, data *per se* is not protected under copyright law. Under the Copyright Act 2021, a compilation of data may be protected as a literary work if it constitutes an intellectual creation by reason of the selection or arrangement of its contents.[7] In this regard, the Singapore courts have held that, for copyright to subsist in any literary work, there must be an authorial creation that is causally connected with the engagement of the human intellect. In the context of compilations, the compiler must have exercised sufficient creativity in selecting or arranging the material within the compilation to cloak the original expression with copyright.[8] Thus, it has been held by the Singapore courts in a case involving two publishers of phone directories that such data is not protected by copyright law (see *Global Yellow Pages Ltd v Promedia Directories Pte Ltd* [2017] 2 SLR 185). It remains to be seen, in the context of AI datasets, what level of creativity is necessary for a selection or arrangement of facts or data to receive copyright protection.

Singapore copyright law does not provide for a *sui generis* database right, such as the one recognised in the European Union.[9]

As an alternative, data may be subject to protection under the common law of confidence.

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New exception for text and data mining

The Singapore Government has observed, in the Singapore Copyright Review Report (issued 17 January 2019), that text and data mining and its applications are crucial elements that fuel economic growth and support Singapore's drive to catalyse innovation in the digital economy. Text and data mining refers to the use of automated techniques to analyse text, data and other content to generate insights and information that may not have been possible to obtain through manual effort.

It is acknowledged that the economic and social impact of the insights obtained through text and data mining is far-reaching and growing. However, those involved in such activities risk infringing copyright law, as the initial phase of the work typically involves incidentally extracting or copying data from large quantities of material that may be protected by copyright.

In this light, section 244 of the Copyright Act 2021 allows the copying of copyrighted materials for the purpose of computational data analysis, provided that certain conditions are satisfied. One such condition involves the user having lawful access to the materials that are copied. Notably, the exception in question does not distinguish between commercial and non-commercial use.

Protection of AI-generated works

At this juncture, it remains to be seen whether and how current IP laws may be applied to protect AI-generated works. Under the present IP legal framework, a number of issues are likely to arise with respect to the protection of AI-generated works. Programs capable of generating such works already exist and are in use. For instance, natural language processing models, such as ChatGPT, are rising in popularity and are frequently used by students and organisations to generate content.[10]

The Singapore courts have recognised that, under existing Singapore copyright law, only natural persons may be considered authors of works, although legal persons, like companies, may own the copyright in works. It is therefore necessary to be able to attribute the creative elements of a work to a natural person in order for copyright to vest.[11] Under the present statutory regime, the courts have further observed that "in cases involving a high degree of automation, there will be no original work produced for the simple reason that there are no identifiable human authors",[12] where authorship is defined in terms of the exercise of independent, original or creative intellectual efforts.[13]

Antitrust/competition laws

The Competition Act 2004 ("Competition Act") establishes a general competition law in Singapore. The Competition Act generally prohibits:

(a) anti-competitive agreements (the section 34 prohibition);[14]
(b) the abuse of a dominant position (the section 47 prohibition);[15] and
(c) mergers and acquisitions that substantially, or may be expected to substantially, lessen competition within any market in Singapore (the section 54 prohibition).[16]

The CCCS is the statutory authority responsible for administering and enforcing the Competition Act.

Competition issues pertaining to AI and big data have been the subject of various studies[17] by the CCCS.

Anti-competitive agreements and concerted practices facilitated by algorithms

Amongst the topics discussed in one of the CCCS's papers[18] is anti-competitive agreements and concerted practices facilitated by algorithms.

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In the paper, the CCCS recognised the need to balance efficiency gains against the increased risk of collusion. In this regard, the CCCS has identified a couple of concerns in relation to algorithms providing new and enhanced means of fostering collusion. First, monitoring algorithms may enhance market transparency and organisations may be able to automatically extract and evaluate real-time information concerning the prices, business decisions and market data of competitors. Second, algorithms increase the frequency of interaction between organisations and the ease of price adjustments, as automated pricing algorithms may be able to automate the decision process of colluding organisations so that prices react simultaneously and immediately to changes in market conditions.[19]

In terms of applying competition enforcement to algorithms, the CCCS has observed that, where the use of algorithms furthers, supports or facilitates any pre-existing or intended anti-competitive agreements or concerted practices, such cases fall squarely within the existing enforcement framework. For example, where algorithms are used to assist in the implementation of an anti-competitive agreement and are ancillary to the main infringement, liability for breaching the section 34 prohibition may be established based on evidence of the underlying agreement or concerted practice. As another example, where a common third-party pricing algorithm is used by competitors to coordinate prices (i.e., "hub-and-spoke" scenarios), such an activity may be caught by the section 34 prohibition.[20]

The CCCS has identified certain concerns about whether the existing competition enforcement framework is adequately equipped to deal with future developments involving algorithms. The main concern identified by the CCCS lies in how algorithms may lead to greater instances of tacitly collusive equilibriums (i.e., collusive agreements being reached without any explicit communication between competitors) that may fall outside the current scope of competition enforcement. Other concerns relate to how an organisation's independent and rational business justifications for using a third-party pricing algorithm may be weighed against any anti-competitive effect that may result from such use, and how liability may be established for any autonomous decision-making that results in collusive outcomes in situations involving self-learning algorithms. The CCCS has noted that, while its current analytical framework is equipped to assess anti-competitive conduct involving algorithms, there are no settled positions on the aforementioned concerns. As such, this remains an evolving field.

Board of directors/governance

On 21 January 2020, the PDPC published the second edition of its Model AI Framework.[21] The Model AI Framework is the result of the efforts of policy makers and regulators in Singapore to articulate a common AI governance approach and a set of consistent definitions and principles relating to the responsible use of AI. It also represents Singapore's attempt to contribute to the global discussion on the ethics of AI by providing a framework that helps translate ethical principles into pragmatic measures that businesses can adopt. Adoption of the Model AI Framework is on a voluntary basis.

The Model AI Framework comprises guidance on four key areas, including organisations' internal governance structures and measures. The Model AI Framework also expressly recognises that "*[t]he sponsorship, support, and participation of the organisation's top management and its Board in the organisation's AI governance are crucial*". One of the suggested practices also includes establishing a coordinating body that has relevant expertise and proper representation from across the organisation to oversee the ethical deployment of AI.

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Briefly, the principles set out in the Model AI Framework across the four key areas include the following:

(a) Internal governance structures and measures: organisations should ensure that there are clear roles and responsibilities in place for the ethical deployment of AI, as well as risk management and internal control strategies.
(b) Determining AI decision-making models: organisations should consider the risks of using a particular AI model based on the probability and severity of harm and determine what degree of human oversight would be appropriate based on the expected probability and severity of harm.
(c) Operations management: organisations should take steps to understand the lineage and provenance of data, the quality of their data, as well as the transparency of the algorithms chosen.
(d) Stakeholder interaction and communication: organisations should take steps to build trust and maintain open relationships with individuals regarding the use of AI, including steps such as general disclosure, increased transparency, policy explanations, and careful design of human-AI interfaces.

Complementing the Model AI Framework is the Implementation and Self-Assessment Guide for Organisations ("ISAGO"), a companion guide that aims to help organisations assess the alignment of their AI governance practices with the Model AI Framework, as well as the Compendium of Use Cases, which features organisations that have implemented accountable AI practices.

In order to assure the public that AI systems are fair, explainable and safe, Singapore is further strengthening its ability to "test" AI, with the launch of AI Verify in May 2022, a self-assessment AI governance testing framework and toolkit for organisations containing both software for technical tests and a series of questions for process checks. AI Verify does not use pass-fail standards, but enables organisations to be more transparent about the performance of their AI systems.[22]

Regulations/government intervention

At present, Singapore does not have legislation governing the use of AI in general (unlike the proposed EU Artificial Intelligence Act), but has voluntary guidelines for individuals and businesses, such as the Model AI Framework.

Protection of personal data

The use of datasets in conjunction with AI applications has the potential to raise data protection ("DP") issues, especially where such datasets contain personal data.

The PDPA sets out the general DP framework, which governs the collection, use and disclosure of personal data by private sector organisations in Singapore. It operates alongside sectoral laws and regulations, such as those issued by MAS for the financial sector.

Under the PDPA's general DP framework, there are presently 10 main obligations, with one more obligation (i.e., the Data Portability Obligation) to come into force in the future. Since the enactment of the PDPA, the general DP framework has largely operated as a consent-based regime. In this regard, the "consent obligation" under the PDPA requires an organisation to obtain an individual's consent before the collection, use or disclosure of personal data, unless an exception applies.[23]

Importantly, the recent amendments to the PDPA under the Personal Data Protection (Amendment) Act 2020 introduced numerous revisions to the consent framework, including

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recognising the presence of deemed consent under certain circumstances, as well as expanding the scope of the exceptions to consent under the PDPA, so as to empower business to use data for innovation with safeguards in place to continue to protect personal data.[24]

A further issue that may be of relevance to organisations using large datasets is whether anonymised data may nevertheless be regarded as personal data for the purposes of the PDPA. According to the PDPC's *Advisory Guidelines on the PDPA for Selected Topics*, anonymised data is not personal data. However, data would not be considered anonymised if there is a serious possibility that an individual could be re-identified, taking into consideration both:

(a) the data itself, or the data combined with other information to which the organisation has or is likely to have access; and
(b) the measures and safeguards (or lack thereof) implemented by the organisation to mitigate the risk of re-identification.

Technological advancements may increase the risk that a dataset that was previously anonymised may be de-anonymised, and thereby be considered personal data.[25] In this regard, the use of algorithms and/or machine-learning technologies that are able to draw inferences about certain personal identifiers of individuals from voluminous datasets may increase the risk of data that is assumed to be anonymised to constitute personal data. Companies that intend to engage in such operations should therefore exercise diligence in order to avoid inadvertently collecting, using and/or disclosing personal data without fulfilling the requisite requirements, thereby infringing the obligations under the PDPA.

Cybersecurity Act 2018

The Cybersecurity Act 2018 establishes the framework for the oversight and maintenance of national cybersecurity in Singapore and imposes duties and obligations on computer systems designated as critical information infrastructure ("CII"). The Cybersecurity Act 2018 operates alongside the Computer Misuse Act 1993 ("CMA"), which criminalises certain cyber activities such as hacking, denial-of-service attacks, infection of computer systems with malware, and other sector-specific regulatory frameworks. On 11 April 2022, the licensing framework for cybersecurity service providers came into effect,[26] along with the Cybersecurity (Cybersecurity Service Providers) Regulations 2022. The licensing framework, which covers cybersecurity service providers offering penetration testing services and managed security operations centre monitoring services, aims to improve the standard of cybersecurity service providers, and address the information asymmetry between such providers and consumers.

Protection from Online Falsehoods and Manipulation Act 2019

Singapore is one of many jurisdictions to have enacted laws to deal with fake news and misinformation. The Protection from Online Falsehoods and Manipulation Act 2019 ("POFMA"), which came into effect on 2 October 2019, seeks to, amongst others, prevent the electronic communication of false statements of fact in Singapore. In particular, it is an offence under POFMA for a person to make or alter an automated computer program (i.e., a "bot") with the intention of using it to communicate false statements of fact in Singapore.

Regulation of autonomous motor vehicles

The Singapore Government has also recognised the potential benefits that AI may bring to the transportation sector and has sought to facilitate trials involving autonomous vehicles. In 2017, the Road Traffic Act 1961 was amended to include specific definitions relating to autonomous vehicles.[27]

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For example, the term "autonomous motor vehicle" means "*a motor vehicle equipped wholly or substantially with an autonomous system (also commonly known as a driverless vehicle), and includes a trailer drawn by such a motor vehicle*". The term "autonomous system" is defined to mean "*a system that enables the operation of the motor vehicle without the active physical control of, or monitoring by, a human operator*".

Furthermore, the Road Traffic (Autonomous Motor Vehicles) Rules 2017 ("Autonomous Vehicles Rules") were introduced to regulate the trials of autonomous vehicles. Most significantly, there is a general prohibition on the trial or use of an autonomous motor vehicle on any road unless the person has specific authorisation.[28]

The framework established under the Autonomous Vehicles Rules sets out that parties interested in trialling autonomous vehicles must submit an application to the Land Transport Authority ("LTA"). The application to the LTA must include, amongst others, the objectives of the trial, the type of autonomous vehicle to be used and how the autonomous vehicle is intended to be used. In granting a party the authorisation to conduct these trials, the LTA retains the discretion to impose conditions, such as a condition for an autonomous vehicle to be accompanied by a safety driver that has been trained to take full control of the autonomous vehicle when required, and state the geographical area in which the trial may be conducted.[29]

In 2018, in response to queries raised in Parliament with respect to the safety measures that are currently in place for conducting trials of autonomous vehicles, the Senior Minister of State for Transport stated that to ensure the safety of all road users, trials must fulfil stringent requirements. For instance, an autonomous vehicle must pass a safety assessment to demonstrate that it can adequately handle basic manoeuvres and safely stop upon the detection of an obstacle. An autonomous vehicle must also have a vehicle fault alert system, which will alert the safety driver of any faults and allow the control of the autonomous vehicle to be immediately transferred to the safety driver.[30]

In January 2019, Enterprise Singapore published Technical Reference 68, a set of provisional national standards to guide the industry in the development and deployment of fully autonomous vehicles. Technical Reference 68 promotes the safe deployment of fully autonomous vehicles in Singapore and contains standards with respect to vehicle behaviour, vehicle safety, cybersecurity and data formats. As a provisional standard, Technical Reference 68 will continue to undergo refinement as autonomous vehicle technologies mature, with the latest update made in 2021.

AI in the workplace

With a small and ageing population, the use of AI and automation is necessary for Singapore to preserve its competitive edge over other economies. At present, automation of jobs is being used to combat the shrinking workforce in areas that rely heavily on manual labour, such as sanitation.[31] The Singapore Government has also introduced measures to encourage the adoption of AI automation, such as through the Enterprise Development Grant.[32] The IMDA also developed and published A Guide to Job Redesign in the Age of AI to help companies manage AI's impact on employees and prepare for the future of work.[33]

Implementation of AI/big data/machine learning into businesses

The COVID-19 pandemic has sped up the adoption of digital technologies by businesses. This, in turn, has led to the increased proliferation of AI adoption by companies, with a recent survey (the Global AI Adoption Index 2022 commissioned by IBM) finding that 57 per cent of around 500 technology decision-makers in small to large firms in Singapore had indicated that their companies had accelerated the roll-out of AI tools.[34]

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As part of facilitating the adoption of AI by businesses, Singapore is also focused on rolling out new initiatives to enhance skillsets in AI amongst the country's workforce. One of the Singapore Government's initiatives, "AI for Everyone", is freely available to the public and seeks to introduce students and working adults to the potential of AI technologies. Furthermore, Singaporeans can make use of the TechSkills Accelerator programme, a SkillsFuture initiative driven by IMDA to develop their competencies in the ICT sector, which includes fields such as AI, software development, data analytics and cybersecurity.

Civil liability

The civil liability regime for AI is in its nascent stages in Singapore. To date, there have been cases where the courts have applied the existing legal frameworks (e.g., contractual, tortious, equitable and property law principles) to risk and liability issues concerning AI.

For example, in the landmark case of *Quoine Pte Ltd v B2C2 Ltd* [2020] SGCA(I) 02, which involved smart contracts and the autonomous algorithmic trading of digital tokens, the existence of a contractual relationship between buyers and sellers when executing a trade on the digital token exchange was recognised by the Court of Appeal. Accordingly, the Court of Appeal applied traditional contractual principles of unilateral mistake and breach of contract to a contractual relationship represented by a smart contract.

In the meantime, studies on the applicability of Singapore law to AI systems are underway, with the Singapore Academy of Law's Law Reform Committee ("LRC") establishing a Subcommittee on Robotics and AI in 2020 to consider and make recommendations on the above. With respect to civil liability, the LRC published the "Report on the Attribution of Civil Liability for Accidents Involving Autonomous Cars", proposing and discussing possible frameworks for determining liability on the basis of negligence, strict liability and no-fault liability in the context of self-driving vehicles.

Criminal issues

The CMA

Although not specific to AI, the CMA is the main legislation in Singapore that prescribes a list of criminal offences relating to computer material or services (which may be relevant to AI systems). Under the CMA, a "computer" refers to an electronic, magnetic, optical, electrochemical or other data processing device, or a group of such interconnected or related devices, performing logical, arithmetic, or storage functions, and includes any data storage facility or communications facility directly related to or operating in conjunction with such a device or group of interconnected or related devices.[35]

The list of offences includes, amongst others:

(a) unauthorised access (e.g., hacking) (section 3(1) of the CMA);
(b) unauthorised modification of computer material (e.g., infection of IT systems with malware) (section 5 of the CMA);
(c) unauthorised obstruction of the use of computers (e.g., denial-of-service attacks) (section 7(1) of the CMA);
(d) possession or use of hardware, software or other tools used to commit cybercrime (section 10(1)(*a*) of the CMA); and
(e) distribution, sale or offering for sale of hardware, software or other tools used to commit cybercrime (section 10(1)(*b*) of the CMA).

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Discrimination and bias

The Model AI Framework sets out principles for the ethical use of AI in the private sector, including addressing problems relating to bias within AI systems by means of:

(a) training staff dealing with AI systems to interpret AI model output and decisions to detect and manage bias in data; and

(b) using reasonable effort to assess and manage the risks of inherent bias and inaccuracy of datasets used for AI model training through ensuring data quality, using different datasets for training, testing and validation, and the periodic reviewing and updating of datasets.

For more information on the Model AI Framework, please refer to the "Board of directors/governance" section.

National security and military

The Ministry of Defence ("MINDEF") and the Singapore Armed Forces ("SAF") have been harnessing AI and data analytics and conducting research into novel technologies to improve existing frameworks and solutions designed to enhance servicemen's safety during training sessions and field operations.[36] The SAF is also conducting trials on the use of autonomous vehicles in military camps and bases for the unmanned transportation of logistics and personnel, in order to reduce manpower requirements for transport operators and improve the efficiency of ground supplies and personnel transportation.[37]

Conclusion

Singapore continues to support the use of artificial intelligence with funding, training and guidance from regulators. With growing international interest in this area as more countries release guidelines, hold public consultations and even introduce legislation regulating the use of AI, Singapore continues to monitor developments around the world to harness the most effective uses of the technology, in a way that maximises its benefits and minimises the risk of harm to any person.

* * *

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