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**RESPONSE TO THE PUBLIC CONSULTATION ON  
PROPOSED ADVISORY GUIDELINES ON  
USE OF PERSONAL DATA IN  
AI RECOMMENDATION AND DECISION SYSTEMS**

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**OC QUEEN STREET LLC**

**31 August 2023**

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## A. INTRODUCTION

1. OC Queen Street LLC extends its appreciation and thanks to the Personal Data Protection Commission (“**PDPC**”) for the opportunity to comment on the *Public Consultation on the proposed Advisory Guidelines on Use of Personal Data in AI Recommendation and Decision Systems* (the “**Consultation Paper**”).
2. We are a Singapore law practice affiliated with the Osborne Clarke’s (collectively, “**OC**”) international, technology-focused law practice with offices in the United Kingdom, United States, Europe and China. We provide commercial and regulatory support to digital businesses and fintech companies and are regularly called upon to advise on data protection and cybersecurity matters.
3. OC is ranked as a global Top 10 “elite” law firm for data-related matters and a global Top 5 firm for data litigation by the Global Data Review’s GDR 100 2023 rankings. OCQS and its Managing Director, Mr. Chia-Ling Koh, have been recognised as a leading law firm and lawyer respectively in the Legal 500 and Chambers & Partners rankings. Many of our clients have given us positive feedback on our work.

*OC Queen Street LLC is “[b]y far the market leader in the area of cutting edge issues presented by new technologies like cryptocurrencies and AI” - Legal 500 TMT 2019*

4. We have reviewed the Consultation Paper and the proposed Advisory Guidelines on Use of Personal Data in AI Recommendation and Decision Systems (“**Proposed Advisory Guidelines**”) and are pleased to provide our comments below and highlight our concerns for further consideration.
5. Please feel free to reach out to us if you have any questions.

## B. SUMMARY OF MAJOR POINTS

6. Our comments are briefly summarised here and are set out in full in the Annex below.

### (a) **Introduction: definition of AI System gives rise to uncertainty**

Paragraph [1.2] of the Proposed Advisory Guidelines provides the scope of the Proposed Advisory Guidelines, to apply to “AI Systems”, defined therein as “systems that embed machine learning (ML) models”.

We observed generally the development of Artificial Intelligence as a research field and the technological development of AI systems, which we state our observations below. In essence, we observed that machine learning is only a small subset of AI despite being most prominent today. Nonetheless, it would be incorrect to define “AI Systems” as any system ‘that embed machine learning models’.

We recommend that the definition of “AI Systems” in the Proposed Advisory Guidelines should be amended in a manner that such definition is broadly scoped and result-oriented. Having observed how “AI” and “AI systems” are defined elsewhere, we provided our proposed amendment to the definition below.

(b) **Deployment: scope of Proposed Advisory Guidelines potentially goes beyond data protection considerations**

Part III provides for measures to be taken by organisations and/or third-party service providers to ensure compliance with PDPA obligations in the deployment or procurement of AI Systems.

While we agree in principle that these are good practices for organisations to adopt, we believe that some measures may go beyond the original scope of the PDPA and/or data protection considerations. This is particularly apparent at paragraph [10.6] where organisations are encouraged to publish information beyond data protection considerations.

We recommend that PDPC should clarify the above points and have proposed ways that the Proposed Advisory Guidelines may be amended to focus on data protection considerations within the mandate of the PDPA.

(c) **Procurement: Guidelines should help entities comply with their PDPA obligations. Where service providers are data intermediaries, the guidelines should be confined to how they comply with their own primary obligations.**

Part IV of the Proposed Advisory Guidelines specifically provides for the situation where an organisation engages the services of a third-party service provider.

Where a service provider is “*processing personal data on behalf of and for the purposes of another organisation pursuant to a contract which is evidenced or made in writing,*” it is a data intermediary and only the Protection, Retention Limitation and Data Breach Notification obligations will be applicable.

We agree in principle that the best practices set out at Paragraphs [11.3] to [11.6] are good to have. They however appear to go beyond PDPA obligations, in particular if a service provider is a data intermediary. This may have the effect of unduly influencing the commercial negotiations of parties.

We recommend that PDPC should limit the Proposed Advisory Guidelines only to practices that are necessary for service providers, acting in the capacity of organisation or data intermediary, to comply with their primary obligations under the PDPA.

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**C. OUR COMMENTS ON THE PROPOSED ADVISORY GUIDELINES**

Section/Paragraph in Proposed Advisory Guidelines	Issue	Our comments						
<p><b>Part I: Introduction Paragraph [1.2]</b></p>	<p>Definition of “AI Systems” is uncertain.</p>	<p>7. “AI Systems” are defined as “systems that embed machine learning (ML) models”. The purpose of this definition appears to be to limit the scope of the Proposed Advisory Guidelines to only AI Systems which are used to make decisions autonomously or to assist a human decision-maker through recommendations and predictions generated by machine learning models. We humbly submit that the definition of “AI Systems” is unsatisfactory.</p> <p>8. Our responses on this issue are structured as follows:</p> <ul style="list-style-type: none"> <li>(a) observations on the history of Artificial Intelligence and the technological development of AI systems;</li> <li>(b) observations on how “Artificial Intelligence” and/or “AI Systems” are defined elsewhere; and</li> <li>(c) recommendations on how the definition of “AI Systems” may be better drafted.</li> </ul> <p><b><u>History of Artificial Intelligence and technological development of AI systems</u></b></p> <p>9. A brief background of the history and development of AI and AI systems is set out below.</p> <table border="1" data-bbox="894 1167 1866 1383"> <thead> <tr> <th data-bbox="894 1167 1115 1203">Period</th> <th data-bbox="1123 1167 1866 1203">Key milestones and developments in AI</th> </tr> </thead> <tbody> <tr> <td data-bbox="894 1209 1115 1312">1950s-1970s</td> <td data-bbox="1123 1209 1866 1312">Symbolic Reasoning Systems operating through rules created by human intervention.</td> </tr> <tr> <td data-bbox="894 1318 1115 1383">1974-1980</td> <td data-bbox="1123 1318 1866 1383">First “AI Winter” – no research/technological development in AI.</td> </tr> </tbody> </table>	Period	Key milestones and developments in AI	1950s-1970s	Symbolic Reasoning Systems operating through rules created by human intervention.	1974-1980	First “AI Winter” – no research/technological development in AI.
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		<p>(which may be referred to as “good old-fashioned AI”).</p> <p>12. The current definition of “AI Systems” may thus exclude software and/or other systems which could replace human decision making and in which the process of such decision making is less visible to users, even if no machine learning model has been embedded.</p> <p>13. The narrow definition of “AI Systems” may be contrasted with the inclusive approach of Japan’s Governance Guidelines for Implementation of AI Principles, which applies to such software and/or other systems “as necessary, even if a machine learning approach is not used.” (defined therein as “AI in the broad sense”).</p> <p><b><u>Definition of “Artificial Intelligence” and “AI Systems” elsewhere</u></b></p> <p>14. We are mindful that there is currently no settled or accepted definition of an “AI System” and are aware of the need for adaptability, regardless of how technology is developed in future.</p> <p>15. It may be thus helpful to look to outside approaches to defining “AI” and/or “AI systems” (see <b>Annex A</b> below). We propose that the following criteria are considered in formulating a definition of “AI Systems”:</p> <ul style="list-style-type: none"> <li>(a) broad definitions are adopted rather than narrow or prescriptive definitions; and</li> <li>(b) result-oriented rather than process-oriented, focused on the end result or output of the AI Systems.</li> </ul> <p>16. The above points can be illustrated by the following examples. A comprehensive list of definitions we have examined can be found at <b>Annex A</b>:</p>

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<p><b>Part III: Deployment Paragraph [10.6]</b></p>	<p>Scope of Proposed Advisory Guidelines potentially goes beyond data protection concerns</p>	<p>19. Paragraph [10.6] of the Proposed Guidelines provides examples of written policies that can help an organization meet the accountability obligation under Section 12 of the PDPA. Section 12 of the PDPA states, amongst others, that “<i>An organisation must develop and implement policies and practices that are necessary for the organisation to meet the obligations of the organisation under this Act [and] make information available on request about [such] policies and practices</i>”. As seen from Section 12 of the PDPA, the accountability obligation is for the organisation to provide information on how the PDPA obligations are met.</p> <p>20. Paragraph [10.6] recommends that an organization has a written policy “<i>provid[ing] information on safety and/or robustness of the AI System or ML model (i.e., how the AI System or ML model will operate when encountering adversarial or unexpected input)</i>”. It is unclear what is the PDPA obligation that such a written policy would address, given that “safety and/or robustness” is a generic concern.</p> <div data-bbox="898 885 1864 1404" style="border: 1px solid black; padding: 5px;"> <p><b>Paragraph [10.6] of the Proposed Advisory Guidelines</b></p> <p>Written policies also play an important function in education and confidence-building, which are necessary ingredients for building consumer trust and confidence. This could include behind-the-scenes measures taken to ensure that the personal data is used in a safe and trusted manner within the AI System, such as:</p> <p>[...]</p> <p>c) For outcomes that have a higher impact on the individual, organisations may wish to consider whether it is useful to provide information on how proper accountability mechanisms and human agency and oversight have been implemented. <b><i>It may also be useful to provide information on safety and/or robustness of the AI System or ML model (i.e., how the AI System or ML model will operate when encountering adversarial or unexpected input).</i></b></p> <p>[emphasis added]</p> </div>

Section/Paragraph in Proposed Advisory Guidelines	Issue	Our comments				
		<p><b><u>Recommendation</u></b></p> <p>21. We recommend that the Proposed Guidelines identifies the relevant PDPA obligation that the written policy addresses. For example, if the PDPA obligation is data protection, the written policy could be to (emphasis added in underline and orange):</p> <table border="1" data-bbox="898 597 1871 886"> <thead> <tr> <th data-bbox="898 597 1388 634">Current Provision</th> <th data-bbox="1388 597 1871 634">Proposed Amendment</th> </tr> </thead> <tbody> <tr> <td data-bbox="898 634 1388 886">... It may also be useful to provide information on safety and/or robustness of the AI System or ML model (i.e., how the AI System or ML model will operate when encountering adversarial or unexpected input)...</td> <td data-bbox="1388 634 1871 886">... It may also be useful to provide information on <u>data protection</u> safety and/or robustness of the AI System or ML model (<del>i.e., how e.g., whether</del> the AI System or ML model will <del>operate-leak</del> <u>personal data that it is trained on</u> when encountering adversarial or unexpected input)...</td> </tr> </tbody> </table>	Current Provision	Proposed Amendment	... It may also be useful to provide information on safety and/or robustness of the AI System or ML model (i.e., how the AI System or ML model will operate when encountering adversarial or unexpected input)...	... It may also be useful to provide information on <u>data protection</u> safety and/or robustness of the AI System or ML model ( <del>i.e., how e.g., whether</del> the AI System or ML model will <del>operate-leak</del> <u>personal data that it is trained on</u> when encountering adversarial or unexpected input)...
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<p><b>PART IV: Procurement Paragraphs [11.2]-[11.6]</b></p>	<p>Guidelines should help entities comply with their PDPA obligations. Where service providers are data intermediaries, the guidelines should be confined to how they comply with their own primary obligations.</p>	<p><b><u>Guidelines should help entities comply with their PDPA obligations</u></b></p> <p>22. Part IV of the Proposed Advisory Guidelines appear to prescribe measures which service providers should take when developing or deploying bespoke or fully customable AI Systems for customers.</p> <p>23. Under the PDPA, a ‘service provider’ may either be an organisation or a data intermediary. If a service provider is “<i>processing personal data on behalf of and for the purposes of another organisation pursuant to a contract which is evidenced or made in writing</i>”, it is a data intermediary and only the Protection, Retention Limitation and Data Breach Notification Obligations will be applicable<sup>1</sup>. See paragraph [11.2].</p>				

<sup>1</sup> Section 4(2) of the PDPA

Section/Paragraph in Proposed Advisory Guidelines	Issue	Our comments
		<p>24. Paragraph [11.2] provides that “Where service providers, as part of developing and deploying bespoke or fully customisable AI Systems, process personal data on behalf of their customers, they may occupy the position of data intermediaries and may thus have to comply with applicable obligations under the PDPA.”</p> <p><b><u>Where service providers are data intermediaries, the guidelines should be confined to how they comply with their own primary obligations</u></b></p> <p>25. We have observed that Paragraphs [11.3] to [11.6] provide for “<i>best practices on how service providers [qua data intermediaries] may support these organisations to develop policies and practices that can meet their <b>Consent</b> and <b>Notification</b> as well as <b>Accountability</b> obligations.</i>”</p> <p>26. Unfortunately, these best practices appear to have nothing to do with a data intermediary’s statutory obligations under the PDPA. In our view, guidelines should be confined to helping entities meet their statutory obligations and not more. Further, in recommending best practices, this may have the effect of unduly influencing the commercial negotiations of parties.</p> <p>27. We recommend that PDPC should limit the Proposed Advisory Guidelines only to practices that are necessary for service providers, acting in the capacity of organisation or data intermediary, to comply with their primary obligations under the PDPA.</p>

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#### D. CONCLUSION

28. We strongly encourage PDPC to resolve the above matters prior to issuing the Proposed Advisory Guidelines. This would provide more clarity and guidance to organisations looking to develop, deploy or procure AI Systems and spur innovation and benefit society while remaining responsible to individuals, whose personal data remains a key resource driving such innovation.
29. OC Queen Street LLC is a Singapore Law Practice with limited liability (Company Registration: 201618305M). It is an independently owned and managed Singapore Law Practice and is also a member of Osborne Clarke's international legal practice.

Osborne Clarke is the business name for an international legal practice and its associated businesses.

Full details here: [osborneclarke.com/verein](https://osborneclarke.com/verein)

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**OC QUEEN STREET LLC**  
**31 August 2023**

**ANNEX A**  
**DEFINITIONS OF “AI SYSTEMS” ACROSS VARIOUS JURISDICTIONS**

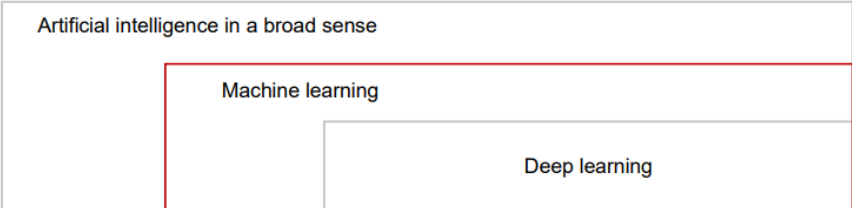
Jurisdiction/Institution	Document/Reference	Web Link	Definition of “AI Systems” [emphasis in original (if any)]
Organisation for Economic Co-operation and Development (“OECD”)	Recommendation of the Council on Artificial Intelligence  OECD/LEGAL/0449	<a href="https://legalinstruments.oecd.org/en/instruments/oecd-legal-0449">https://legalinstruments.oecd.org/en/instruments/oecd-legal-0449</a>	<p><b>On the proposal of the Committee on Digital Economy Policy:</b></p> <p><b>I. AGREES</b> that for the purpose of this Recommendation the following terms should be understood as follows:</p> <p style="padding-left: 40px;"><i>– AI system: An AI system is a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. AI systems are designed to operate with varying levels of autonomy.</i></p>
European Union	Proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules on Artificial Intelligence (Artificial Intelligence Act) and amending certain Union legislative acts  Article 2          Annex I	<a href="https://artificialintelligenceact.eu/the-act/">https://artificialintelligenceact.eu/the-act/</a>  <a href="https://artificialintelligenceact.eu/annexes/">https://artificialintelligenceact.eu/annexes/</a>	<p style="text-align: right;"><i>Article 3</i> <i>Definitions</i></p> <p>For the purpose of this Regulation, the following definitions apply:</p> <p>[...]</p> <p>‘Artificial intelligence system’ (AI system) means software that is developed with one or more of the techniques and approaches listed in Annex I and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with; [...]</p> <p style="text-align: right;"><b><u>ANNEX I</u></b> <b><u>ARTIFICIAL INTELLIGENCE TECHNIQUES AND APPROACHES</u></b></p>

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			<p style="text-align: center;"><b><u>referred to in Article 3, point 1</u></b></p> <p>(a) Machine learning approaches, including supervised, unsupervised and reinforcement learning, using a wide variety of methods including deep learning;</p> <p>(b) Logic- and knowledge-based approaches, including knowledge representation, inductive (logic) programming, knowledge bases, inference and deductive engines, (symbolic) reasoning and expert systems;</p> <p>(c) Statistical approaches, Bayesian estimation, search and optimization methods.</p>
United States of America	Title 15 of the United States code, Chapter 119  15 U.S.C § 9401	<a href="https://www.law.cornell.edu/uscode/text/15/9401#3">https://www.law.cornell.edu/uscode/text/15/9401#3</a>	<p>The term “artificial intelligence” means a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments. Artificial intelligence systems use machine and human-based inputs to—</p> <p>(A) perceive real and virtual environments;</p> <p>(B) abstract such perceptions into models through analysis in an automated manner; and</p> <p>(C) use model inference to formulate options for information or action.</p>
Singapore  Infocomm Media Development Authority and Personal Data Protection	Model Artificial Intelligence Governance Framework (Second Edition)	<a href="https://www.pdpc.gov.sg/-/media/files/pdpc/pdf-files/resource-for-organisation/ai/sgmo">https://www.pdpc.gov.sg/-/media/files/pdpc/pdf-files/resource-for-organisation/ai/sgmo</a>	<p>AI refers to a set of technologies that seek to simulate human traits such as knowledge, reasoning, problem solving, perception, learning and planning, and, depending on the AI model, produce an output or decision (such as a prediction, recommendation, and/or classification). AI technologies rely on AI algorithms to generate models. The most</p>

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Commission		<a href="#">delaigovframework2.pdf</a>	appropriate model(s) is/are selected and deployed in a production system.
Hong Kong S.A.R. Office of the Privacy Commissioner for Personal Data	Guidance on Ethical Development and Use of Artificial Intelligence	<a href="https://www.pcpd.org.hk/english/resources_centre/publications/files/guidance_ethical_e.pdf">https://www.pcpd.org.hk/english/resources_centre/publications/files/guidance_ethical_e.pdf</a>	Artificial intelligence (“AI”) refers to a family of technologies that involve the use of computer programmes and machines to mimic the problem-solving and decision-making capabilities of human beings. Examples of AI applications include image recognition, speech recognition, chatbots, data analytics and automated decision-making or recommendation. AI technologies are still evolving, and more new applications may emerge.
Shenzhen, China	Regulations for the Promotion of the Artificial Intelligence Industry in Shenzhen Special Economic Zone  深圳经济特区人工智能产业促进条例  English Translation by the <a href="#">Centre for Security and Emerging Technology</a>	<a href="http://www.szrd.gov.cn/szrd_zlda/szrd_zlda_flg/flfg_szfg/content/post_834707.html">http://www.szrd.gov.cn/szrd_zlda/szrd_zlda_flg/flfg_szfg/content/post_834707.html</a>	<b>Article 2</b> The term Artificial Intelligence (AI) as used in these Regulations refers to the simulation, extension, or expansion of human intelligence by using computers or equipment controlled by them to sense the environment, acquire knowledge, perform deduction, and carry out other operations.
Shanghai, China	Regulations for the Promotion of the Development of the Artificial Intelligence Industry in Shanghai	<a href="https://www.ssme.sh.gov.cn/public/news!loadNewsDetail.do?id=2c91c28d83647d7001837da955a60a55">https://www.ssme.sh.gov.cn/public/news!loadNewsDetail.do?id=2c91c28d83647d7001837da955a60a55</a>	<b>Article 2</b> As used in this Regulation, artificial intelligence refers to the system of theories, methods, technologies, and applications that uses computers and computer-controlled machines to simulate, extend, and expand human intelligence, perceive the environment, acquire knowledge, and use knowledge to achieve optimal results.



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	Municipality  上海市促进人工智能产业发展条例  English Translation by the <a href="#">Centre for Security and Emerging Technology</a>		
Japan  Expert Group on how AI Principles should be Implemented, Ministry of Economy, Trade and Industry	Governance Guidelines for Implementation of AI Principles Ver. 1.1	<a href="https://www.meti.go.jp/english/press/2022/0128_003.html">https://www.meti.go.jp/english/press/2022/0128_003.html</a>	<p>The scope of the Guidelines includes <b><u>AI systems in which a machine learning approach is used and which are at least partially created by inductively using data</u></b>, as shown below. However, <b><u>for software and other systems which could replace human decision making and in which the process of such decision making is less visible to users, the Guidelines are expected to be referred to as necessary, even if a machine learning approach is not used</u></b><sup>1</sup>.</p> <p><b>AI system:</b> A system that is developed with a machine learning approach, including supervised, unsupervised and reinforcement learning, using a wide variety of methods including deep learning and that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. AI systems are designed to operate with varying levels of autonomy. It includes not only software but also a machine which contains software as an element<sup>2</sup>.</p> <p style="text-align: center;">The area in the red box is the scope of the Guidelines</p>

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			 <p>[Footnote 1]: There is currently no clear definition of artificial intelligence (see “Social Principles of Human-centric AI” adopted by the Integrated Innovation Strategy Promotion Council (March 29, 2019)), and it is not appropriate to strictly define the scope of artificial intelligence in a broad sense.</p> <p>[Footnote 2]: Guided by the OECD’s definition of AI system. In the proposed AI regulation of the European Commission, AI system simply means software. The OECD’s definition of an AI system is not limited to software.</p>
Dubai, United Arab Emirates  Smart Dubai	AI Ethics Principles and Guidelines	<a href="https://www.digitaldubai.ae/initiatives/ai-principles-ethics">https://www.digitaldubai.ae/initiatives/ai-principles-ethics</a>	<p>Artificial Intelligence (also “AI”)</p> <p>The capability of a functional unit to perform functions that are generally associated with human intelligence such as reasoning, learning and self-improvement. An AI system is a product, service, process or decision-making methodology whose operation or outcome is materially influenced by artificially intelligent functional units.</p> <p>Artificially Intelligent System (also “AI system”)</p> <p>A product, service, process or decision-making methodology whose operation or outcome is materially influenced by artificially intelligent functional units</p>

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			<p><b>Note 1 to entry:</b> it is not necessary for a system’s outcome to be solely determined by artificially intelligent functional units in order for the system to be defined as an artificially intelligent system</p> <p><b>Note 2 to entry:</b> a particular feature of AI systems is that they learn behaviour and rules not explicitly programmed in</p> <p><b>EXAMPLE:</b> A small claims court uses an artificially intelligent software package to collect evidence pertaining to a case, compare it to similar cases in the past, and present a recommended decision to a judge. The judge determines the final outcome. This decision-making methodology is materially influenced by an artificially intelligent functional unit, and is therefore classified as an AI system.</p> <p><b>EXAMPLE:</b> A government entity uses a chatbot which allows customers to ask routine questions, book appointments and conduct minor financial transactions. The chatbot responds to customer queries with pre-written responses and is based on pre-programmed decision rules. Therefore the chatbot is not an AI system. If, however, the chatbot autonomously adjusted its treatment of customers based on the outcome of past cases, it would be an AI system.</p>

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