

選定地方對人臉識別技術的規管

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1. 引言

1.1 人臉識別技術是一項可根據詳細容貌資料識別個別人士身份的技術，¹一般用於加強智能電話保安、記錄出勤、出入境管制和罪案調查。在香港，一如其他地方，人臉識別技術的應用在公營及私營機構日漸增加，引起社會關注。首先，未經他人要求使用人臉識別技術會帶來私隱問題。第二，人臉識別技術涉及收集敏感資料，貯存期間可能外洩。第三，人臉識別技術尚未獲廣泛認定為成熟科技，容易錯誤辨認和出現誤差，尤其是用作辨認女性及有色人種。

1.2 容貌影像是生物辨識資料的一種。²在香港，適用於公營及私營機構的《個人資料(私隱)條例》("《私隱條例》")(第 486 章)未有明確定義何謂人臉識別/生物辨識資料。雖然個人資料私隱專員公署曾發布指引資料，指出生物辨識資料是《私隱條例》下的個人資料，並特別指出要謹慎處理生物辨識資料，但指引本身並無法律約束力。因此，有意見認為本港現行法律或許未能充分反映科技變化，需要加強監察人臉識別技術的使用。³應莫乃光議員要求，資料研究組就美國加利福尼亞州("加州")及伊利諾伊州、歐洲聯盟("歐盟")以及日本四個地方的人臉識別技術規管進行研究，現已完成有關工作。這些地方獲選定為研究對象，主要由於當地對相關規管有新進展，以更清晰法例規管私營及/或政府機構(尤其是執法機構)對人臉識別資料的收集、使用及/或保護。相關文件現收納於一個資料套，下文概述主要的研究結果。

2. 選定地方對人臉識別技術的規管

2.1 這項研究的所有選定地方均已訂立或修訂法例，規管私營機構對人臉識別技術的使用。鑒於公眾對私隱與安全的關注日增，伊利諾伊州已就生物辨識資料訂立特定法例，範圍包括人臉識別資料。歐盟已將人臉識別/生物辨識

¹ 其原理是偵測個人的面部特徵，例如眼部位置及顴骨之間的距離，然後與載有已知人臉資料的數據庫比較，以進行配對。

² 其他生物辨識資料包括 DNA 樣本、指紋、掌型幾何、瞳孔及視網膜。

³ 政府正考慮檢討《私隱條例》，包括制訂強制資料外洩通報機制及資料保留時限，但未有明確提及人臉識別技術/生物辨識資料。

資料歸類為敏感個人資料⁴，而加州已將生物特徵資料列為需要加強保護的其中一類個人資料。日本亦已更新當地的個人資料私隱法律，擴闊個人資料的定義，以涵蓋人臉識別/生物辨識資料，部分原因是為了追上科技發展及消除規管上的不確定性。

2.2 關於**資料的收集和使用**，歐盟及伊利諾伊州已規定商業機構須取得顧客**同意**，方可收集人臉識別資料。伊利諾伊州進一步規定有關的同意須為書面同意，並制定有關人工智能的法例，規管僱主在**視像面試**中對人臉識別技術的使用。在加州和日本，商業機構須將收集人臉識別資料的目的告知僱客，而僱客可**選擇不容許**其資料用於其他用途，例如將資料移轉(包括銷售)予第三方。加州另有規定，如僱客提出要求，商業機構須披露獲移轉資料的第三方身份。

2.3 **資料保護**方面，伊利諾伊州規定商業機構須擬定人臉識別/生物辨識資料的**保留時間表**，並供公眾查閱，而加州、日本和歐盟則向消費者授予要求**刪除資料**的權利。日本為平衡大數據發展及國民對私隱的關注，准許在原來資料收集目的以外使用**匿名的人臉識別資料**，前提是該等資料有足夠保護，不會被還原至最初形式。歐盟法例亦指明商業機構應採用資料保護技術，例如**資料加密**，以及要求企業在處理大量敏感資料時，委任**資料保護主任**一職。

2.4 各個選定地方均沒有就人臉識別技術相關個人資料外洩，訂定專門**懲罰**條文。在歐盟，資料保護當局可向違規者徵收巨額**行政罰款**，金額可達2,000萬歐羅(1億7,200萬港元)，或等同全球業務全年收益的4%，以較高者為準，但如在日本違規，則可被監禁。在加州及伊利諾伊州，僱客有權就私隱被侵犯而向企業提出訴訟，賠償金額按**每項違規**事件計算。⁵除日本以外，所有選定地方的商業機構均須向監管機構和受影響人士**通報大型資料外洩事件**；而歐盟另有規定，涉事機構須在72小時內通報監管當局。⁶上述規定與香港不同，本港並無強制通報資料外洩機制，而資料保護機構亦無權施加行政罰款或懲罰。⁷

2.5 不同地方對**政府機構**使用人臉識別技術的規管各異。加州最近以專門法例頒布**臨時禁令**，禁止執法部門於2023年前在**隨身攝錄機**上使用人臉識別

⁴ 歐盟成員國可就《通用數據保障條例》的若干條文制定減免條文。例如，荷蘭准許將生物辨識資料用於認證或保安目的。據報，歐盟亦正考慮限時禁止在公共空間使用人臉識別技術。

⁵ 這兩個美國州份容許消費者提出集體訴訟，所引伸的經濟責任或與歐盟的罰款相若。在加州，每項違規的最高賠償金額為750美元(5,826港元)，在伊利諾伊州則為5,000美元(38,858港元)。加州的企業如在30日寬限期內停止違規情況，可避免法律訴訟。

⁶ 在加州和伊利諾伊州，如任何外洩事件影響逾500名居民，即達到須要通報監管機構的門檻。在歐盟，如外洩事件可能對受影響人士的"權利和自由"構成風險，即須通報。

⁷ 然而，香港的個人資料私隱專員可發出執行通知，要求資料使用者修正違規情況，如未能遵循，在司法程序後可能會受懲罰。

技術，以待技術改善後再作檢討。⁸ 位於加州的三藩市甚至**全面禁止**市內所有政府部門**使用人臉識別技術**，以釋除公眾對監控的疑慮。⁹ 如任何部門擬購買人臉識別技術，必須說明有關技術的詳情及所得資料將如何使用和得到保護，以提交**公眾聽證會**，並供三藩市立法機關審批。歐盟亦已訂立法例，規定如將人臉識別技術應用於**自動化決策**(例如製作個人概況彙編)以對個別人士進行預測，並對該名人士帶來不利法律影響，執法機構將不可使用有關技術。¹⁰

2.6 伊利諾伊州和日本與香港的情況類似，當地並無特定法例或條文禁止政府機構使用人臉識別技術。然而，在伊利諾伊州，政府機構在發生個人資料(包括人臉識別/生物辨識資料)**大型外洩**事件後，須**通報**監管機構和受影響人士。雖然日本沒有明確規定須通報資料外洩事件，但當地訂有基本**政策**，闡述中央和地方政府對於保護個人資料的方向以及應採取的行動。

⁸ 美國尚未就人臉識別技術制定聯邦法例，而是由各州份和城市自行立法規管。

⁹ 聯邦政府控制的設施(例如機場)及所用流動裝置有內置人臉識別技術的政府人員可獲豁免。

¹⁰ 除非根據法例獲授權或取得豁免，否則禁止自動化處理個人資料。

Regulation of facial recognition technology in selected places

References

Overview

1. BBC. (2019) *Facial Recognition Fails on Race, Government Study Says*. Available from: <https://www.bbc.com/news/technology-50865437> [Accessed March 2020].
2. European Union Agency for Fundamental Rights. (2019) *Facial Recognition Technology: Fundamental Rights Considerations in the Context of Law Enforcement*. Available from: <https://fra.europa.eu/en/publication/2019/facial-recognition> [Accessed March 2020].
3. Forbes. (2019) *Facial Recognition Technology: Here are the Important Pros and Cons*. Available from: <https://www.forbes.com/sites/bernardmarr/2019/08/19/facial-recognition-technology-here-are-the-important-pros-and-cons/#56e0859114d1> [Accessed March 2020].
4. Georgetown Law Center on Privacy & Technology. (2016) *The Perpetual Line-up: Unregulated Police Face Recognition in America*. Available from: <https://www.perpetuallineup.org/> [Accessed March 2020].
5. National Institute of Standards and Technology. (2019) *Face Recognition Vendor Test (FRVT) Part 3: Demographic Effects*. Available from: <https://nvlpubs.nist.gov/nistpubs/ir/2019/NIST.IR.8280.pdf> [Accessed March 2020].
6. Nature. (2019) *Halt the Use of Facial-recognition Technology Until it is Regulated*. Available from: <https://www.nature.com/articles/d41586-019-02514-7> [Accessed March 2020].
7. Norton. (2020) *How Does Facial Recognition Work?* Available from: <https://us.norton.com/internetsecurity-iot-how-facial-recognition-software-works.html> [Accessed March 2020].

8. Omoyiola, B.O. (2018) *Overview of Biometric and Facial Recognition Techniques*. Available from: <https://www.iosrjournals.org/iosr-jce/papers/Vol20-issue4/Version-1/A2004010105.pdf> [Accessed March 2020].
9. The Conversation. (2019) *Facial Recognition: Ten Reasons You Should Be Worried About the Technology*. Available from: <https://theconversation.com/facial-recognition-ten-reasons-you-should-be-worried-about-the-technology-122137> [Accessed March 2020].
10. The Guardian. (2019a) *Major Breach Found in Biometrics System Used by Banks, UK Police and Defence firms*. Available from: <https://www.theguardian.com/technology/2019/aug/14/major-breach-found-in-biometrics-system-used-by-banks-uk-police-and-defence-firms> [Accessed March 2020].
11. The Guardian. (2019b) *What is Facial Recognition - And How Sinister is it?* Available from: <https://www.theguardian.com/technology/2019/jul/29/what-is-facial-recognition-and-how-sinister-is-it> [Accessed March 2020].
12. The International Association of Privacy Professionals. (2019) *How Should We Regulate Facial-Recognition Technology*. Available from: <https://iapp.org/news/a/how-should-we-regulate-facial-recognition-technology/> [Accessed March 2020].
13. United Nations Higher Commissioner for Human Rights. (2018) *The Right to Privacy in the Digital Age*. Available from: https://ap.ohchr.org/documents/dpage_e.aspx?si=A/HRC/39/29 [Accessed March 2020].

Hong Kong

14. Bloomberg. (2019) *Hong Kong Police Already Have AI Tech That Can Recognize Faces*. Available from: <https://www.bloomberg.com/news/articles/2019-10-22/hong-kong-police-already-have-ai-tech-that-can-recognize-faces> [Accessed March 2020].
15. Constitutional and Mainland Affairs Bureau. (2020) *Review of the Personal Data (Privacy) Ordinance*. LC Paper No. CB(2)512/19-20(03). Available from: <https://www.legco.gov.hk/yr19%2D20/english/panels/ca/papers/ca20200120cb2-512-3-e.pdf> [Accessed March 2020].



16. DLA Piper. (2020) *Data Protection Laws of the World: Hong Kong*. Available from: <https://www.dlapiperdataprotection.com/index.html?t=law&c=HK> [Accessed March 2020].
17. EJ Insight. (2019) *The Threat from Facial Recognition Technology*. Available from: <http://www.ejinsight.com/20190717-the-threat-from-facial-recognition-technology/> [Accessed March 2020].
18. GovHK. (2019a) *LCQ5: Application of Artificial Intelligence and Protection of Personal Data Privacy*. Available from: <https://www.info.gov.hk/gia/general/201911/13/P2019111300530.htm> [Accessed March 2020].
19. GovHK. (2019b) *LCQ11: Facial and Visual Image Recognition Technologies*. Available from: <https://www.info.gov.hk/gia/general/201911/06/P2019110600396.htm> [Accessed March 2020].
20. GovHK. (2019c) *LCQ15: Privacy Issues Involved in Use of CCTV Systems with Automated Facial Recognition Function*. Available from: <https://www.info.gov.hk/gia/general/201906/05/P2019060500349.htm> [Accessed March 2020].
21. Legislative Council Secretariat. (2020) *Review of the Personal Data (Privacy) Ordinance*. Paper for meeting on 20 January 2020 of the Panel on Constitutional Affairs. LC Paper No. CB(2)512/19-20(04). <https://www.legco.gov.hk/yr19%2D20/english/panels/ca/papers/ca20200120cb2-512-4-e.pdf> [Accessed March 2020].
22. Mondaq. (2016) *Hong Kong: Blood, Sweat and Tears: Guidance Issued in Hong Kong on the Collection and Use of Biometric Data*. Available from: <http://www.mondaq.com/hongkong/x/455746/Data+Protection+Privacy/Blood+Sweat+And+Tears+Guidance+Issued+In+Hong+Kong+On+The+Collection+And+Use+Of+Biometric+Data> [Accessed March 2020].
23. Office of the Privacy Commissioner for Personal Data. (2015) *Guidance on Collection and Use of Biometric Data*. Available from: https://www.pcpd.org.hk/english/resources_centre/publications/files/GN_biometric_e.pdf [Accessed March 2020].

24. Office of the Privacy Commissioner for Personal Data. (2016) *Collection and Use of Biometric Data*. Available from: https://www.pcpd.org.hk/english/news_events/whatison/files/PCPD_HK_GCC_Luncheon_13Apr2016.pdf [Accessed March 2020].
25. Office of Privacy Commissioner for Personal Data. (2018) *European Union General Data Protection Regulation 2016*. Available from: https://www.pcpd.org.hk/english/data_privacy_law/eu/files/eugdpr_e.pdf [Accessed March 2020].
26. Office of Privacy Commissioner for Personal Data. (2019) *Guidance on Data Breach Handling and the Giving of Breach Notifications*. Available from: https://www.pcpd.org.hk/english/resources_centre/publications/files/DataBreachHandling2015_e.pdf [Accessed March 2020].
27. Office of the Privacy Commissioner for Personal Data. (Undated) *The Personal Data (Privacy) Ordinance*. Available from: https://www.pcpd.org.hk/english/data_privacy_law/ordinance_at_a_Glance/ordinance.html [Accessed March 2020].
28. 《人臉辨識監察行蹤 惹私隱外泄疑慮》，《頭條日報》，2019年8月21日，網址：<https://hd.stheadline.com/news/realtime/hk/1572552/>即時-港聞-人臉辨識監察行蹤-惹私隱外泄疑慮 [於 2020 年 3 月登入]。
29. 《民企爆與港鐵測超高清閉路電視 可辨識人臉 港鐵：暫無計劃推行》，《香港 01》，2018 年 1 月 16 日，網址：<https://www.hk01.com/社會新聞/149835/民企爆與港鐵測超高清閉路電視-可辨識人臉-港鐵-暫無計劃推行> [於 2020 年 3 月登入]。
30. 《為「監控城市」鋪路？釋公眾疑慮暫緩智慧燈柱》，2019 年 9 月 16 日，網址：https://unwire.pro/2019/09/16/smart_lamppost/feature/ [於 2020 年 3 月登入]。
31. 個人資料私隱專員公署：《公署回應有關入境處引入容貌識別技術事宜》，2019 年，網址：https://www.pcpd.org.hk/tc_chi/news_events/media_enquiry/enquiry_20190416c.html [於 2020 年 3 月登入]。

32. 個人資料私隱專員公署：《公署回應有關屋苑的保安公司建議具人工智能面部識別功能的大廈保安智能門禁系統》，2019年，網址：https://www.pcpd.org.hk/tc_chi/news_events/media_enquiry/enquiry_20190814.html [於2020年3月登入]。
33. 個人資料私隱專員公署：《私隱專員回應有關使用智能手機的臉部辨識功能與私隱事宜》，2017年，網址：https://www.pcpd.org.hk/tc_chi/news_events/media_enquiry/enquiry_20170918.html [於2020年3月登入]。
34. 《第一城人臉辨識技術惹爭議 開放透明最重要》，《香港01》，2019年8月16日，網址：<https://www.hk01.com/01觀點/364488/第一城人臉辨識技術惹爭議-開放透明最重要> [於2020年3月登入]。
35. 《彭博指警用軟件識別人臉 3年 警無否認：用時會守法》，《明報》，2019年10月24日，網址：http://www.mingpaocanada.com/van/htm/News/20191024/HK-gae3_r.htm [於2020年3月登入]。

California

36. Bloomberg Law. (2019a) *California Extends Data Breach Law to Passports, Biometric Data*. Available from: <https://news.bloomberglaw.com/privacy-and-data-security/california-extends-data-breach-law-to-passports-biometric-data> [Accessed March 2020].
37. Bloomberg Law. (2019b) *San Francisco Fine Tunes Facial Recognition Policy (Corrected)*. Available from: <https://news.bloomberglaw.com/privacy-and-data-security/san-francisco-moves-to-let-city-workers-use-facial-recognition> [Accessed March 2020].
38. California Legislative Information. (2018) *California Consumer Privacy Act of 2018*. Available from: https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?division=3.&part=4.&lawCode=CIV&title=1.81.5 [Accessed March 2020].



39. California Legislative Information. (2019a) *An Act to Add and Repeal Section 832.19 of the Penal Code, Relating to Law Enforcement*. Assembly Bill No. 1215, Chapter 579. Available from: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB1215 [Accessed March 2020].
40. California Legislative Information. (2019b) *An Act to Amend Sections 1798.29, 1798.81.5, and 1798.82 of the Civil Code, Relating to Information Privacy*. Assembly Bill No. 1130, Chapter 750. Available from: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB1130. [Accessed March 2020].
41. Citris and the Banatao Institute. (2019) *Facing the Future: Protecting Human Rights in Policy Strategies for Facial Recognition in Law Enforcement*. Available from: https://citrispolicylab.org/wp-content/uploads/2019/09/Facing-the-Future_Ruhrmann_CITRIS-Policy-Lab.pdf [Accessed March 2020].
42. CNN. (2019a) *California Lawmakers Ban Facial-recognition Software from Policy Body Cams*. Available from: <https://edition.cnn.com/2019/09/12/tech/california-body-cam-facial-recognition-ban/index.html> [Accessed March 2020].
43. CNN. (2019b) *San Francisco Just Banned Facial-recognition Technology*. Available from: <https://edition.cnn.com/2019/05/14/tech/san-francisco-facial-recognition-ban/index.html> [Accessed March 2020].
44. DLA Piper. (2019) *Data Protection Laws of the World: United States*. Available from: <https://www.dlapiperdataprotection.com/index.html?t=law&c=US> [Accessed March 2020].
45. Financial Times. (2020) *California's Privacy Law Arrives to Confusion and Costs for Businesses*. Available from: <https://www.ft.com/content/7b541808-2bdf-11ea-bc77-65e4aa615551> [Accessed March 2020].
46. Government Technology. (2019) *Could California's Data Privacy Law Be a Model for the Nation?* Available from: <https://www.govtech.com/policy/Could-Californias-Data-Privacy-Law-Be-a-Model-for-the-Nation.html> [Accessed March 2020].



47. Practical Law. (2018a) CCPA and GDPR Comparison Chart. Available from: <https://www.bakerlaw.com/webfiles/Privacy/2018/Articles/CCPA-GDPR-Chart.pdf> [Accessed March 2020].
48. Practical Law. (2018b) Expert Q&A: *The California Consumer Privacy Act of 2018 (CCPA)*. Available from: <https://media2.mofo.com/documents/180713-ca-consumer-privacy-act-2018.pdf> [Accessed March 2020].
49. San Francisco Board of Supervisors. (2019a) *Administrative Code - Acquisition of Surveillance Technology*. Available from: <https://sfbos.org/sites/default/files/o0107-19.pdf> [Accessed March 2020].
50. San Francisco Board of Supervisors. (2019b) *Administrative Code - Acquisition, Retention, and Use of Surveillance Technology*. Available from: <https://sfbos.org/sites/default/files/o0286-19.pdf> [Accessed March 2020].
51. State of California Department of Justice. (2020) *Data Security Breach Reporting*. Available from: <https://oag.ca.gov/privacy/databreach/reporting> [Accessed March 2020].
52. The Economist. (2019) *Companies Should Take California's New Data-Privacy Law Seriously*. Available from: <https://www.economist.com/business/2019/12/18/companies-should-take-californias-new-data-privacy-law-seriously> [Accessed March 2020].
53. The Guardian. (2019) *San Francisco was Right to Ban Facial Recognition. Surveillance is a real danger*. Available from: <https://www.theguardian.com/commentisfree/2019/may/30/san-francisco-ban-facial-recognition-surveillance> [Accessed March 2020].
54. The National Law Review. (2018) *The California Consumer Privacy Act: Getting a Head Start on Compliance*. Available from: <https://www.natlawreview.com/article/california-consumer-privacy-act-getting-head-start-compliance> [Accessed March 2020].



Illinois

55. Biometric Update. (2019) *What Businesses Need to Know about the Illinois' Biometric Information Privacy Act*. Available from: <https://www.biometricupdate.com/201910/what-businesses-need-to-know-about-the-illinois-biometric-information-privacy-act> [Accessed March 2020].
56. Bloomberg Law. (2018) *Biometric Privacy Litigation: The Next Class Action Battleground*. Available from: <https://biglawbusiness.com/biometric-privacy-litigation-the-next-class-action-battleground> [Accessed March 2020].
57. CATO Institute. (2018) *Chicago Police Don't Need Facial Recognition Drones*. Available from: <https://www.cato.org/blog/chicago-police-dont-need-facial-recognition-drones> [Accessed March 2020].
58. Chicago Tribune. (2019) *ICE Used Facial Recognition to Scan Driver's License Photos in Some States. Illinois Says It Has Turned Down ICE Requests*. Available from: <https://www.chicagotribune.com/business/ct%2Dbiz%2Dice%2Dfacial%2Drecognition%2Ddrivers%2Dlicense%2Dphotos%2D20190708%2Dijsj2yealvdo3ftjjughzetwsq-story.html> [Accessed March 2020].
59. Georgetown Law Center on Privacy & Technology. (2016a) *Chicago Police Department (CPD)*. Available from: https://www.perpetuallineup.org/sites/default/files/2016-10/9_IL_Chicago.pdf [Accessed March 2020].
60. Georgetown Law Center on Privacy & Technology. (2016b) *The Perpetual Line-up: Unregulated Police Face Recognition in America*. Available from: <https://www.perpetuallineup.org/> [Accessed March 2020].
61. Georgetown Law Center on Privacy & Technology. (2019) *America Under Watch: Face Surveillance in the United States*. Available from: <https://www.americaunderwatch.com/> [Accessed March 2020].
62. Government Technology. (2018) *When Do Privacy Regulations Go Too Far?* Available from: <https://www.govtech.com/opinion/When-Do-Privacy-Regulations-Go-Too-Far.html> [Accessed March 2020].



63. Holland & Knight. (2019) *BIPA Update: Class Actions on the Rise in Illinois Courts*. Available from: <https://www.hklaw.com/en/insights/publications/2019/07/bipa-update-class-actions-on-the-rise-in-illinois-courts> [Accessed March 2020].
64. Hunton Andrews Kurth LLP. (2019) *Illinois General Assembly Approves Breach Notification Amendment to Personal Information Protection Act*. Available from: <https://www.huntonprivacyblog.com/2019/06/04/illinois-general-assembly-approves-breach-notification-amendment-to-personal-information-protection-act/> [Accessed March 2020].
65. Illinois General Assembly. (2020) *Amendment to the Personal Information Protection Act*. Public Act 101-0343. <http://www.ilga.gov/legislation/publicacts/fulltext.asp?name=101%2D0343&GA=101&SessionId=108&DocTypeId=SB&DocNum=1624&GAID=15&Session=> [Accessed March 2020].
66. Illinois General Assembly. (Undated) *Artificial Intelligence Video Interview Act*. Available from: <http://www.ilga.gov/legislation/fulltext.asp?DocName=&SessionId=108&GA=101&DocTypeId=HB&DocNum=2557&GAID=15&LegID=118664&SpecSess=&Session=> [Accessed March 2020].
67. Illinois General Assembly. (Undated) *Biometric Information Privacy Act*. Available from: <http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=3004&ChapterID=57> [Accessed March 2020].
68. Illinois General Assembly. (Undated) *Personal Information Protection Act*. <http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=2702&ChapterID=67> [Accessed March 2020].
69. Jackson Lewis. (Undated) *Illinois Biometric Information Privacy Act FAQs*. Available from: <https://www.jacksonlewis.com/sites/default/files/docs/IllinoisBIPAFAs.pdf> [Accessed March 2020].
70. The National Law Review. (2019a) Keeping an Eye on Artificial Intelligence Regulation and Legislation. Available from: <https://www.natlawreview.com/article/keeping-eye-artificial-intelligence-regulation-and-legislation> [Accessed March 2020].
71. The National Law Review. (2019b) *The Artificial Intelligence Video Interview Act: Privacy Implications of Illinois's AI Statute*. Available from: <https://www.natlawreview.com/article/artificial-intelligence-video-interview-act-privacy-implications-illinois-s-ai> [Accessed March 2020].



72. WTTW. (2019) *Chicago Police: Facial Recognition Software is 'Seldom Used'*. Available from: <https://news.wttw.com/2019/05/21/chicago-police-facial-recognition-software-seldom-used> [Accessed March 2020].

Japan

73. Chambers and Partners. (2019) *Data Protection & Cybersecurity*. Available from: <http://www.mhmjapan.com/content/files/00036491/20190424-050138.pdf> [Accessed March 2020].

74. CNET. (2019) *Tokyo 2020 Olympics Using Facial Recognition System from NEC, Intel*. Available from: <https://www.cnet.com/news/tokyo-2020-olympics-using-facial-recognition-system-from-nec-intel/> [Accessed March 2020].

75. DLA Piper. (2020) *Data Protection of Laws of the World: Japan*. Available from: <https://www.dlapiperdataprotection.com/index.html?t=law&c=JP> [Accessed March 2020].

76. Endpoint Protector. (2019) *Data Protection in Japan: All You Need to Know about APPI*. Available from: <https://www.endpointprotector.com/blog/data-protection-in-japan-appi/> [Accessed March 2020].

77. Find Biometrics. (2016) *Tokyo Police to Use 3D Mugshots*. Available from: <https://findbiometrics.com/tokyo-police-3d-mugshots-301263/> [Accessed March 2020].

78. Japanese Law Translation Database. (2003) *Act on the Protection of Personal Information Held by Administrative Organs*. Available from: http://www.japaneselawtranslation.go.jp/law/detail_main?re=02&ia=03&vm=02&id=131 [Accessed March 2020].

79. Library of Congress. (2018) *Online Privacy Law: Japan*. Available from: <https://www.loc.gov/law/help/online-privacy-law/2017/japan.php> [Accessed March 2020].

80. Nikkei Asian Review. (2017a) *Facial Recognition's Got an Eye on You*. Available from: <https://asia.nikkei.com/Business/Facial-recognition-s-got-an-eye-on-you> [Accessed March 2020].



81. Nikkei Asian Review. (2017b) *Japan Paves the Way for Selling Anonymized Data*. Available from: <https://asia.nikkei.com/Politics/Japan-paves-way-for-selling-anonymized-data> [Accessed March 2020].
82. Personal Information Protection Commission. (2016a) *Amended Act on the Protection of Personal Information*. Available from: https://www.ppc.go.jp/files/pdf/Act_on_the_Protection_of_Personal_Information.pdf [Accessed March 2020].
83. Personal Information Protection Commission. (2016b) *Amendment to the Cabinet Order to Enforce the Act on the Protection of Personal Information*. Available from: https://www.ppc.go.jp/files/pdf/Cabinet_Order.pdf [Accessed March 2020].
84. Personal Information Protection Commission. (2016c) *Outline of the Amended Personal Information Protection Act*. Available from: https://www.ppc.go.jp/files/pdf/280222_outline_v2.pdf [Accessed March 2020].
85. Personal Information Protection Commission. (2017) *Privacy Culture and Data Protection Laws in Japan*. Available from: https://www.privacyconference2017.org/eng/files/ppt/masao_horibe.pdf [Accessed March 2020].
86. Personal Information Protection Commission. (Undated) *Current Legal Framework of the Protection of Personal Information*. Available from: https://www.ppc.go.jp/files/pdf/280222_Current_Legal_Framework_v2.pdf [Accessed March 2020].
87. Synced Review. (2019) *One Year Countdown: Ready AI Security for the Tokyo 2020 Olympics*. Available from: <https://syncedreview.com/2019/07/20/one-year-countdown-readying-ai-security-for-the-tokyo-2020-olympics/> [Accessed March 2020].
88. The Asahi Shimbun. (2018) *Cameras Filming Shoppers for AI Analysis Raise Privacy Concerns*. Available from: <http://www.asahi.com/ajw/articles/AJ201809120015.html?fbclid=IwAR3tipW%2DNuLU1i9XsxzCYI3qz9idvxcJH2s wQY4Pou0GNQs3LXttLHh1CNE> [Accessed March 2020].

89. The International Association of Privacy Professionals. (2017) *GDPR Matchup: Japan's Act on the Protection of Personal Information*. Available from: <https://iapp.org/news/a/gdpr-matchup-japans-act-on-the-protection-of-personal-information/> [Accessed March 2020].
90. The Japan Times. (2019) *Japan to Begin Screening Departing Foreign Travelers with Facial Recognition Technology*. Available from: <https://www.japantimes.co.jp/news/2019/07/02/national/japan-begin-screening-departing-foreign-travelers-facial-recognition-technology/#.XikSqmZaUk> [Accessed March 2020].

The European Union

91. BBC. (2019) Facial Recognition: School ID Checks Lead to GDPR Fine. Available from: <https://www.bbc.com/news/technology-49489154> [Accessed March 2020].
92. EUR-Lex. (2016a) *Directive (EU) 2016/680 of the European Parliament and of the Council*. Available from: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A32016L0680> [Accessed March 2020].
93. EUR-Lex. (2016b) *General Data Protection Regulation*. Available from: https://eur%2Dlex.europa.eu/legal%2Dcontent/EN/TXT/?uri=uriserv%3AOJ.L._2016.119.01.0001.01.ENG&toc=OJ%3AL%3A2016%3A119%3ATOC [Accessed March 2020].
94. European Union Agency for Fundamental Rights. (2019) *Facial Recognition Technology: Fundamental Rights Considerations in the Context of Law Enforcement*. Available from: <https://fra.europa.eu/en/publication/2019/facial-recognition> [Accessed March 2020].
95. European Commission. (2018) Fact sheet on *A New Era for Data Protection in the EU*. Available from: https://ec.europa.eu/info/sites/info/files/data%2Dprotection%2Dfactsheet%2Dchanges_en.pdf [Accessed March 2020].
96. European Commission. (2019) *Mythbusting: General Data Protection Regulation*. Available from: https://ec.europa.eu/info/sites/info/files/100124_gdpr_factsheet_mythbusting.pdf [Accessed March 2020].



97. European Commission. (Undated) *FAQ: Are the Obligations the Same Regardless of the Amount of Data My Company/Organisation Handles?* Available from: https://ec.europa.eu/info/law/law-topic/data-protection/reform/rules-business-and-organisations/obligations/are-obligations-same-regardless-amount-data-my-company-organisation-handles_en [Accessed March 2020].
98. European Commission. (Undated) *FAQ: Are There Restrictions on the Use of Automated Decision-making?* Available from: https://ec.europa.eu/info/law/law-topic/data-protection/reform/rules-business-and-organisations/dealing-citizens/are-there-restrictions-use-automated-decision-making_en#answer [Accessed March 2020].
99. European Commission. (Undated) *FAQ: Can My Company/My Organisation be Liable for Damages?* Available from: https://ec.europa.eu/info/law/law-topic/data-protection/reform/rules-business-and-organisations/enforcement-and-sanctions/sanctions/can-my-company-my-organisation-be-liable-damages_ga [Accessed March 2020].
100. European Commission. (Undated) *FAQ: Under What Conditions Can My Company/Organisation Process Sensitive Data?* Available from: https://ec.europa.eu/info/law/law-topic/data-protection/reform/rules-business-and-organisations/legal-grounds-processing-data/sensitive-data/under-what-conditions-can-my-company-organisation-process-sensitive-data_en [Accessed March 2020].
101. European Commission. (Undated) *FAQ: What if My Company/Organisation Fails to Comply with the Data Protection Rules?* Available from: https://ec.europa.eu/info/law/law-topic/data-protection/reform/rules-business-and-organisations/enforcement-and-sanctions/sanctions/what-if-my-company-organisation-fails-comply-data-protection-rules_en [Accessed March 2020].
102. European Commission. (Undated) *FAQ: What is a Data Breach and What Do We Have to Do in Case of a Data Breach?* Available from: https://ec.europa.eu/info/law/law-topic/data-protection/reform/rules-business-and-organisations/obligations/what-data-breach-and-what-do-we-have-do-case-data-breach_en [Accessed March 2020].

103. European Commission. (Undated) *FAQ: What Personal Data is Considered Sensitive?* Available from: https://ec.europa.eu/info/law/law%2Dtopic/data%2Dprotection/reform/rules-business-and-organisations/legal%2Dgrounds%2Dprocessing-data/sensitive-data/what-personal-data%2Dconsidered-sensitive_en [Accessed March 2020].
104. Fieldfisher. (2019) *The Use of Biometric Data in an Employment Context.* Available from: <https://privacylawblog.fieldfisher.com/2019/the-use-of-biometric-data-in-an-employment-context> [Accessed March 2020].
105. Financial Times (2019) *EU Plans Sweeping Regulation of Facial Recognition.* Available from: <https://www.ft.com/content/90ce2dce-c413-11e9-a8e9-296ca66511c9> [Accessed March 2020].
106. Gerrish Legal. (2019) *GDPR - Can Biometric Data Processing be Lawful?* Available from: <https://www.gerrishlegal.com/legal-blog/2019/10/3/gdpr-can-biometric-data-processing-be-lawful> [Accessed March 2020].
107. Information Commissioner's Office. (2017) *Guide to the Law Enforcement Provisions.* Available from: <https://www.pdpjournals.com/docs/887848.pdf> [Accessed March 2020].
108. Information Commissioner's Office. (Undated) *Preparing for the Law Enforcement Requirement (Part 3) of the Data Protection Act 2018: 12 Steps to Take Now.* Available from: <https://ico.org.uk/media/for-organisations/documents/2014918/dp-act-12-steps-infographic.pdf> [Accessed March 2020].
109. Saifert, J and Quintel, T. (2018) *Data Protection Directive (EU) 2016/680 for Police and Criminal Justice Authorities.* Available from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3285873 [Accessed March 2020].
110. The Guardian. (2020) *EU Eyes Temporary Ban on Facial Recognition in Public Places.* Available from: <https://www.theguardian.com/technology/2020/jan/17/eu-eyes-temporary-ban-on-facial-recognition-in-public-places> [Accessed March 2020].
111. The International Association of Privacy Professionals. (2017) *Processing Biometric Data? Be Careful, Under the GDPR.* Available from: <https://iapp.org/news/a/processing-biometric-data-be-careful-under-the-gdpr/> [Accessed March 2020].

