EXHIBIT 1

[Proposed] Amicus Curiae Brief of the American Civil Liberties Union, American Civil Liberties Union of Nevada, and Innocence Project in Support of Plaintiff's Motion for Partial Summary Judgment

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UNITED STATES DISTRICT COURT

DISTRICT OF NEVADA

JASON KILLINGER,

Plaintiff,

v.

RENO POLICE OFFICER R. JAGER and CITY OF RENO,

Defendants.

Case No. 3:25-cv-388-MMD-CSD

AMICUS CURIAE BRIEF OF THE AMERICAN CIVIL LIBERTIES UNION, AMERICAN CIVIL LIBERTIES UNION OF NEVADA, AND INNOCENCE PROJECT IN SUPPORT OF PLAINTIFF'S MOTION FOR PARTIAL SUMMARY JUDGMENT

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INTEREST OF AMICI CURIAE

The American Civil Liberties Union ("ACLU") is a nationwide, nonprofit, nonpartisan organization dedicated to the principles embodied in the United States Constitution and our nation's civil rights laws. The American Civil Liberties Union of Nevada is a state affiliate of the ACLU. The ACLU has appeared before courts throughout the country in cases involving the dangers posed by unfettered police use of emerging technologies, including wrongful arrest cases involving facial recognition technology. *See, e.g. Williams v. City of Detroit*, No. 2:21-cv-10827-LJM-DRG (E.D. Mich.) (counsel); *Dillon v. City of Jacksonville Beach*, No. 3:26-cv-1930 (M.D. Fla.) (counsel); *Woodruff v. Oliver*, No. 23-cv-11886, 2025 WL 2231045 (E.D. Mich. Aug. 5, 2025) (amicus); *Parks v. McCormac*, No. 2:21-cv-04021 (D.N.J.) (amicus).

The Innocence Project ("IP") is a nonprofit organization dedicated to freeing the innocent, preventing wrongful convictions, and creating fair, compassionate, and equitable systems of justice for everyone. The IP advocates—in individual cases and through legislative and administrative initiatives—for changes in laws and procedures to reduce the risk of wrongful convictions, including those based on unreliable forensic methods and technologies. Misuse of and overreliance on emerging technologies of dubious reliability, including facial recognition technology, have led to several documented arrests and prosecutions of innocent people. The IP has appeared as *amicus curiae* before courts throughout the country in cases involving the use of such emerging technologies. *See, e.g.*, *State v. Miles*, 357 A.3d 903 (N.J. 2026) (facial recognition technology); *State v. Arteaga*, 296 A.3d 542 (N.J. Super. Ct. App. Div. 2023) (facial recognition technology); *Commonwealth v. Rios*, 258 N.E.3d 303 (Mass. 2025) (ShotSpotter); *Schmidt v. City of Norfolk*, No. 26-1227 (4th Cir.) (appeal pending) (automated license plate readers).

INTRODUCTION AND SUMMARY OF ARGUMENT

Facial recognition technology (FRT) is inherently unreliable. It is not designed to, and in fact cannot, produce a positive identification. Instead, it uses algorithmic assessments of the similarity between a probe image and faces in a reference database to generate possible leads, either through a retroactive search or, as here, in real time. This is not an exact science: FRT systems often produce false matches and have led to a number of known wrongful arrests. Reno Police Department's (RPD) reliance on FRT here is paradigmatic of the kinds of circumstances that create the greatest risk of misidentification.

Several factors make FRT systems unreliable. First, FRT algorithms are not uniform or consistent. Because different algorithms create different mathematical representations of faces, called "templates," two algorithms comparing the same photos might produce very different measures of similarity. Second, a high similarity score does not mean that two photos show the same person. FRT algorithms can and sometimes do generate very similar templates for different individuals, leading to false matches. Third, FRT systems are highly susceptible to the quality of the probe image. They are less reliable with poorly lit or low-resolution images, as well as when the subject's face is partially obscured or at an angle—precisely the circumstances that tend to occur with live FRT systems like the Peppermill Casino system that led to Mr. Killinger's arrest.

On top of the technology's inherent unreliability, human review introduces additional risk of error. In general, humans are not particularly reliable at comparing unfamiliar faces. Humans are also susceptible to automation bias, tending to over-rely on computer-generated outputs like FRT results even when those outputs are wrong or contrary evidence is available. Compounding these risks are other well-documented cognitive biases—confirmation bias and tunnel vision—that can lead investigators to elevate evidence that supports their initial theory of a case and disregard

evidence that contradicts it, just as Officer Jager did here. These cognitive biases have long been known to contribute to wrongful convictions.

Because of its unreliability, an FRT result on its own cannot establish probable cause. Courts have long recognized that fundamentally unreliable evidence, such as an anonymous tip, requires corroboration before it can justify an arrest; so too does FRT. Recognizing this, numerous experts, law enforcement agencies, and FRT developers themselves have warned against treating an FRT result as a positive identification; many agencies, well before Mr. Killinger's arrest, promulgated explicit policies requiring further investigation and independent corroboration of FRT results before officers could make an arrest.

Yet the necessary corroboration was wholly absent here. If anything, Mr. Killinger's valid Nevada driver's license and other proofs of identity should have dispelled suspicion. Nor does Officer Jager's direct visual comparison of Mr. Killinger to photos of the prior trespasser constitute probable cause. At best, Officer Jager had evidence that Mr. Killinger *resembled* someone who was barred from the casino premises—but mere resemblance is not probable cause. And Officer Jager's direct comparison was not independent corroboration; it was influenced by the FRT result and likely a product of the very cognitive biases known to lead officers astray. It was, in effect, a highly suggestive single-suspect show-up under conditions ripe for misidentification.

Finally, municipal liability exists based on RPD's failure to train officers on FRT's limitations. The risk that officers' reliance on FRT would lead them to violate constitutional rights was so obvious and foreseeable that failing to provide training amounted to deliberate indifference. By the time of Mr. Killinger's arrest, RPD knew that its officers would routinely act on FRT results: it had both received dozens of FRT-based calls for service from Peppermill and, as early as 2020, used FRT itself. The risks of not providing training had also long been apparent. Several

high-profile wrongful arrests based on FRT, and the lawsuits they precipitated, received extensive coverage in national publications from 2020 to mid-2023. And many law enforcement agencies—including the Las Vegas Metropolitan Police Department—had established policies or trainings on FRT well prior to 2023; template policies were readily available from the Department of Justice and other sources. In this context, RPD's decision not to train its officers on FRT created exactly the kind of obvious risk of constitutional harm that *Monell* contemplates.

ARGUMENT

I. Facial Recognition Technology Is Inherently Unreliable and Cannot Be Relied on as a Positive Identification of a Suspect.

Facial recognition technology cannot produce a positive identification. That is because FRT is designed only to present *possible leads* based on an algorithmic assessment of facial similarity. The technology is not designed to return definitive matches, nor is it capable of reliably doing so. The technology often makes errors, including by flagging faces that are similar to, but not the same person as, the input image.[1]

In this case, the FRT application that led to Mr. Killinger's wrongful arrest was a live facial recognition system used by Peppermill Casino. Live FRT involves the real-time biometric processing of video imagery to attempt to scan faces as they move through a camera's field of

[1] For a general explanation of how facial recognition technology works and its limitations, see: Nat'l Acads. of Scis., Eng'g, & Med., *Facial Recognition Technology: Current Capabilities, Future Prospects, and Governance* 31–64 (2024) [hereinafter "National Academies Report"], https://nap.nationalacademies.org/catalog/27397/facial-recognition-technology-current-capabilities-future-prospects-and-governance. *See also* the expert report on use of FRT in the FRT wrongful arrest case *Williams v. City of Detroit*. Expert Witness Report of Dr. Michael King ¶¶ 46–59, *Williams*, No. 2:21-cv-10827 (E.D. Mich.), *available at* https://www.aclu.org/cases/williams-v-city-of-detroit-face-recognition-false-arrest?document=Expert-Report-of-Dr-Michael-C-King-Regarding-Automated-Face-Recognition-Technology [https://perma.cc/P2PE-B2JS].

view and look for *potential* matches to faces in a database.[2] Live FRT systems apply image processing algorithms to one or more video feeds to 1) detect and isolate human faces, 2) process those facial images (known as "probe images") through a machine-learning algorithm to extract a mathematical representation called a "template" (sometimes called a "faceprint"[3]), and 3) compare that template to a set of templates extracted from images in a reference database.[4]

The FRT system at issue here extracts probe images from the live feeds of surveillance cameras located at the entrances and main thoroughfares of the Peppermill Casino.[5] As individuals move through the cameras' fields of view, with varying angles, distances, and lighting conditions, facial recognition software scans the faces, attempts to extract templates, and compares them, virtually instantaneously, against a reference database assembled by Peppermill consisting of images of people who have been banned from the premises for a variety of reasons.[6] When the FRT system determines that the probe image crosses some threshold of similarity to an image in the reference database, it generates an automatic alert to the phones of casino security personnel.[7] On any given day, casino personnel can receive anywhere from 20 or fewer to hundreds of alerts.[8]

According to Peppermill's records, on September 17, 2023, the casino's live FRT system generated five alerts flagging Mr. Killinger's face as similar to a reference-database image of a

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[2] Although live FRT differs in some respects from the investigative facial recognition technology systems used by many police departments to attempt to generate leads concerning the identity of an unknown suspect, the underlying processes are largely the same.

[3] A faceprint has been described as a "map written in code that measures the distance between features, lines, and facial elements." *State v. Arteaga*, 296 A.3d 542, 555 (N.J. Super. Ct. App. Div. 2023 (quoting Andrew Guthrie Ferguson, *Facial Recognition and the Fourth Amendment*, 105 Minn. L. Rev. 1105, 1111 (2021)).

[4] National Academies Report, *supra* note 1, at 19–20.

[5] Mot. Summ. J., Ex. 1, Hill Dep. 32:14–24 (ECF No. 95-2).

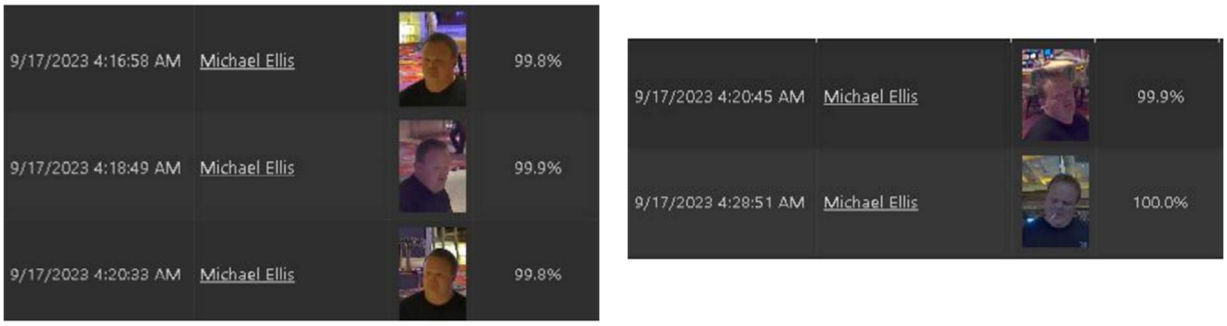
[6] *Id.* 33:13–35:25.

[7] *Id.* 42:14–21; 43:5–12.

[8] *Id.* 44:10–16.

man named Michael Ellis. Each alert is accompanied by a percentage: Two of the alerts are accompanied by a percentage of "99.8%," two by a percentage of "99.9%," and one by a percentage of "100%." *See* Figure 1, *infra*. Although these scores were believed to be conclusive by the Peppermill security workers and the arresting officer, Officer Jager, they do not mean that the identification was certain, and they do not represent a "99.8%" or "100%" probability that Mr. Killinger was in fact the same person as Mr. Ellis.

Figure 1:[9]



In an FRT system, each algorithmic comparison of the probe-image template to a template in the reference database generates a similarity score (sometimes called a confidence score).[10] Depending on the FRT system, a similarity score can be represented as a percentage, a decimal between zero and 1, a number between zero and 1000, or some other metric. As reflected above, Peppermill's system represents similarity scores as a percentage, to one decimal place (*e.g.*, "99.8%").

[9] Mot. Summ. J., Ex. 32 at 11–12 (ECF No. 95-10). The version of Plaintiff's Exhibit 32 attached to Plaintiff's Motion for Partial Summary Judgment is a black-and-white copy. The higher-quality color version at Figure 1 was produced to the Plaintiff in discovery and provided to amici at their request.

[10] *See* National Academies Report, *supra* note 1, at 33.

A similarity score is the statistical output generated by a specific algorithm, reflecting the apparent degree of visual similarity, or feature alignment, between the templates extracted from a probe image and a reference image as determined by that algorithm.[11] Similarity scores express only how similar a particular FRT system assesses that two faces are to each other, based on the system's own unique algorithmic design and how the machine-learning algorithm was trained. Because different FRT systems operate based on different algorithms trained on different data, the same pair of images may generate widely diverging similarity scores when run through different FRT systems.[12]

Further, when processed through an FRT algorithm, two different individuals who share some superficial features, may, in some cases, generate highly similar facial templates. Those templates, when compared by the algorithm, may generate high (even "perfect," 100%) similarity scores, yet not be a true match.[13] As one source explains, "[t]he inability for any [facial recognition] technology to generate a unique faceprint for each individual is at the heart of many face recognition system errors."[14] Thus, high similarity scores do not always indicate the same individual. (By a similar token, low similarity scores do not always indicate different individuals,

[11] *See id.*
[12] Joy Buolamwini et al., Algorithmic Justice League, *Facial Recognition Technologies*: *A Primer* 12 (May 29, 2020), https://people.cs.umass.edu/~elm/papers/FRTprimer.pdf [https://perma.cc/4SN6-J2Z4].
[13] *See* Eyal Press, *Does A.I. Lead Police to Ignore Contradictory Evidence?*, The New Yorker (Nov. 13, 2023), https://www.newyorker.com/magazine/2023/11/20/does-a-i-lead-police-to-ignore-contradictory-evidence/ ("Even a confidence score of ninety-nine percent isn't a guaranteed match.").
[14] Buolamwini et al., *supra* note 12, at 12.

as the same person may look very different in different photos based on position, photo composition and quality, age, and other factors.[15])

It is unsurprising, then, that one former Peppermill employee testifies that "[i]t was not unusual that the percentage of FRT would appear as 100% and be wrong."[16] Other wrongful arrest cases feature similar errors, with police falsely arresting people after FRT algorithms misidentified them as possible matches to a wanted suspect and assigned similarity scores that police incorrectly interpreted to be reliable evidence of a match.[17] And even putting aside the known risk of very high similarity scores accompanying false matches, Peppermill and the Reno Police Department did not even reserve arrests only for very high similarity scores. In Peppermill's record of citations and arrests attributable to FRT alerts between August 2023 and December 2024, similarity scores associated with the FRT results range as low as 85.9%.[18] This indicates that Peppermill maintains a relatively low threshold for alerting security personnel to a purported match.[19]

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[15] *Id.*; *see also* National Academies Report, *supra* note 1, at 33 ("[N]o two photos of a face are identical—owing to even the slightest variations in lighting, facial expression, head position, and camera noise.").

[16] Mot. Summ. J., Ex. 18, Gamino Decl. ¶ 14 (ECF No. 95-8).

[17] *See, e.g.*, First Am. Compl. ¶ 86 (ECF No. 35), *Dillon v. City of Jacksonville Beach*, No. 3:26-cv-1930 (M.D. Fla. July 13, 2026) (wrongful arrest of Robert Dillon after FRT system generated similarity score of "93%"); Yona Gavino, *Charlotte Father of 10 Says Jacksonville Police AI Misidentification Cost Him His Freedom, Home, Job*, Action News Jax (June 2, 2026), https://www.actionnewsjax.com/news/local/charlotte-father-10-says-jacksonville-police-ai-misidentification-cost-him-his-freedom-home-job/ZHHJGP3NOZETJCPMSCBQGES6SY/ (wrongful arrest of Jalil Richardson after FRT system generated similarity score of "85%"); Woodbridge Defendants' Statement of Material Facts ¶ 41 (ECF No. 109-3), *Parks v. McCormack*, No. 21-cv-4021 (D.N.J. Sep. 5, 2024) (wrongful arrest of Nijeer Parks after FRT system generated similarity score of 594 out of 1000).

[18] Mot. Summ. J., Ex. 17, Heward Decl. 39 (ECF No. 95-7) (documenting 85.9% score for incident logged Oct. 14, 2024, at 6:06 p.m.).

[19] The lower the threshold score is set, the more purported matches are flagged, and with more flagged "matches" comes a greater number of false positives. *See* Buolamwini et al., *supra* note 12, at 11. Considering the sheer number of people who visit the Peppermill Casino each year, a threshold score in the mid-80s functions as a wide dragnet, risking sweeping up a substantial number of false positives simply due to the volume of faces being scanned.

A number of factors can contribute to false matches from FRT systems, leading to assignment of relatively high similarity scores to images that are not actually a match. A similarity score merely "reflects an 'algorithmic best guess'—one whose accuracy may vary depending on the quality of the probe photograph, which can be compromised by factors such as lighting and camera angle."[20] And the risk of false matches can be particularly acute with live FRT systems, due to the conditions under which live video processing operates. FRT algorithms generate false positives even in controlled test conditions, but they are especially prone to error when probe image quality is variable or low.[21] Lighting, shadow, angle, pose, facial expression, and partial occlusion of the face all affect accuracy.[22] The resolution (i.e., blurriness, or pixel density) of the image can also have a huge effect on the ability of an FRT algorithm to produce an accurate match.[23] In real-world conditions, live FRT systems routinely capture faces in motion, at significant distance, turned partially away from the camera, irregularly lit, and otherwise suboptimal in quality.

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[20] Press, *supra* note 13.

[21] *See* David W. Jacobs & Oliver Stephenson, *Face Recognition Performance, Bias, and the Limits of Technical Fixes*, Fed'n of Am. Scis. (May 6, 2026), https://fas.org/publication/face-recognition-bias/ ("In tasks involving uncontrolled settings with uncooperative subjects however, such as identifying people from surveillance images, accuracy is much lower and more difficult to measure.").

[22] *See, e.g.*, Patrick Grother et al., *Face Recognition Vendor Test (FRVT) Part 2: Identification*, Nat'l Inst. Standards & Tech. 9–10 (Sept. 2019), https://www.govinfo.gov/content/pkg/GOVPUB-C13-a4a30985dc259996c42d67593fec5166/pdf/GOVPUB-C13-a4a30985dc259996c42d67593fec5166.pdf [https://perma.cc/BR6Y-6X6D]; U.S. Dep't of Homeland Sec., DHS/ICE/PIA-054, *Privacy Impact Assessment for the ICE Use of Facial Recognition Services* 26 (2020), https://www.dhs.gov/sites/default/files/publications/privacy-pia-ice-frs-054-may2020.pdf [https://perma.cc/2TMV-JMGH].

[23] *See, e.g.*, Aman Bhatta et al., *Impact of Blur and Resolution on Demographic Disparities in 1-to-Many Facial Identification*, Proc. IEEE/CVF Winter Conf. on Applications of Comput. Vision (WACV) Workshops 412–20 (2024).

Moreover, the likelihood of false matches increases when there are differences in quality or orientation between the probe image and the reference images against which it is compared.[24] Rarely (if ever) will the quality and orientation of a real-world probe image closely resemble the photos against which it is being compared, which are typically driver's license, mugshot, or similarly standardized images. In this case, for example, the probe images feature Mr. Killinger turned at various angles from the camera, in variable lighting conditions. *See* Figure 1, *supra*.

The National Institute of Standards and Technology's (NIST) Facial Recognition Vendor Test demonstrates the significance of these differences in image quality. NIST testing in 2020 found that error rates for one of the top algorithms increased dramatically from 0.1% when matching high-quality mugshots to 9.3% when using images captured in real-world conditions.[25]

[24] *See, e.g.*, Jacobs & Stephenson, *supra* note 21 ("FRT in the real world may face much higher failure rates [than in test conditions]. This can occur due to more challenging imaging conditions, such as using a surveillance image as a probe, instead of a mugshot, or other factors such as changes in the subject's appearance. For example, when the best performing system at mugshot identification is applied in a scenario in which the gallery contains visa images and the probe is taken from a kiosk, the error rate increases by a factor of about 18 with a false negative error about one time in 30 instead of one time in 500. This is a fairly typical increase, and still represents relatively idealized conditions compared to the most challenging ones.").

[25] Patrick Grother et al., *Face Recognition Vendor Test (FRVT) Part 2: Identification*, Nat'l Inst. Standards & Tech. 63 (Mar. 27, 2020), https://github.com/usnistgov/frvt/blob/nist-pages/reports/1N/frvt_1N_report_2020_03_27.pdf (comparing performance on highly controlled and uncontrolled, lower-quality photos for an algorithm developed by the company NEC); *see also* William Crumpler, *How Accurate are Facial Recognition Systems – and Why Does It Matter?*, Ctr. Strategic & Int'l Stud. (Apr. 14, 2020), https://www.csis.org/blogs/strategic-technologies-blog/how-accurate-are-facial-recognition-systems-and-why-does-it [https://perma.cc/CJ3P-4DZM]. NIST has continued conducting ongoing tests of FRT algorithms and has found that even today, error rates remain high for probe images of lower quality or with the subject's face at an angle, "often in excess of 20% even with the more accurate algorithms." Patrick Grother et al., *Face Recognition Vendor Test (FRVT) Part 2: Identification*, Nat'l Inst. Standards & Tech. 12 (Sept. 4, 2026) (draft supplement), https://pages.nist.gov/frvt/reports/1N/frvt_1N_report.pdf.

Peppermill Casino itself estimates a false positive percentage of approximately 10%.[26] It may in fact be dramatically higher.[27]

Examples of deficits in real-world performance of live FRT systems highlight their limitations. In January 2020, for example, the London Metropolitan Police began using a live FRT system that scanned individuals in public and compared faces against a "watchlist" of roughly 17,000 people, mostly drawn from police custody images.[28] An independent audit of six trials of the system found that the technology generated 42 purported matches across the trials, but only eight of those matches were confirmed to be correct.[29] Similarly, in South Wales, which implemented live facial recognition starting in May 2017, an audit assessing the system's performance between June 2017 and March 2018 found that only 3% of "matches" generated by the first algorithm the system used could be confirmed.[30] A new algorithm was implemented in October 2017, but even the improved algorithm only resulted in a confirmed "match" rate of 26%.[31]

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[26] Mot. Summ. J., Ex. 1, Hill Dep., 45:17-24 (ECF No. 95-2).
[27] *See* Mot. Summ. J., Ex. 18, Gamino Decl. ¶ 13–14 (ECF No. 95-8). This is particularly likely because of Peppermill's apparently low similarity threshold for reporting a match, which would reduce the likelihood of a "miss" or false negative at the cost of increasing the risk of false positives. *See* Mot. Summ. J., Ex. 17, Heward Decl. 39 (ECF No. 95-7) (documenting similarity scores as low as 85.9% in Peppermill's FRT-based citations and arrests); Buolamwini et al., *supra* note 12, at 12 (explaining tradeoff between false-positive and false-negative errors based on similarity score threshold).
[28] *See* Paul Sandle, *On London's Streets, Facial Recognition Tests the Balance Between Security and Liberty*, Reuters (May 22, 2026), https://www.reuters.com/world/uk/londons-streets-facial-recognition-tests-balance-between-security-liberty-2026-05-22/.
[29] Pete Fussey & Daragh Murray, *Independent Report on the London Metropolitan Police Service's Trial of Live Facial Recognition Technology*, Univ. Essex Hum. Rts. Ctr. 10 (2019), https://repository.essex.ac.uk/24946/1/London-Met-Police-Trial-of-Facial-Recognition-Tech-Report-2.pdf.
[30] Bethan Davies, Martin Innes & Andrew Dawson, *An Evaluation of South Wales Police's Use of Automated Facial Recognition*, Univs.' Police Sci. Inst., Cardiff Univ. 7 (Sept. 2018), https://www.cardiff.ac.uk/__data/assets/pdf_file/0006/2426604/AFRReportDigital.pdf.
[31] *Id.*

Compounding the inaccuracies inherent in live facial recognition are the race, gender, and age bias found across FRT systems in general. These systems exhibit higher rates of false matches when used on people of color, women, and young adults than on white people, men, and older people.[32] According to NIST, "even the best algorithms can be wrong more than 20 percent of the time" in test conditions,[33] and "Asian and African American people were up to 100 times more likely to be misidentified than white men, depending on the particular algorithm and type of search."[34] Moreover, disparities in accuracy rates can have intersectional effects: tests of some algorithms have shown, for example, that older Black women "were over 3,000 times more likely to have a false positive match than [younger] Eastern European men."[35] These disparities are the result of FRT algorithms being "trained mostly on White faces," on lighting and color contrast issues with digital photography that result in images of darker skinned people being underexposed, and other factors.[36] As demonstrated by this case, FRT systems can make errors even when used

[32] *See, e.g.*, National Academies Report, *supra* note 1, at 55–57; Patrick Grother et al., *Face Recognition Vendor Test (FRVT) Part 3: Demographic Effects*, Nat'l Inst. Standards & Tech. 7–8 (Dec. 2019), https://pages.nist.gov/frvt/reports/demographics/nistir_8280.pdf [https://perma.cc/7L99-A2QJ]; K.S. Krishnapriya et al., *Issues Related to Face Recognition Accuracy Varying Based on Race and Skin Tone*, 1 IEEE Transactions on Tech. & Soc'y 8, 8–20 (2020).

[33] Khari Johnson, *The Hidden Role of Facial Recognition Tech in Many Arrests*, Wired (Mar. 7, 2022), https://www.wired.com/story/hidden-role-facial-recognition-tech-arrests/ [https://perma.cc/ECB6-LM22].

[34] Drew Harwell, *Federal Study Confirms Racial Bias of Many Facial-Recognition Systems, Casts Doubt on Their Expanding Use*, Wash. Post (Dec. 19, 2019), https://www.washingtonpost.com/technology/2019/12/19/federal-study-confirms-racial-bias-many-facial-recognition-systems-casts-doubt-their-expanding-use/.

[35] U.S. Comm'n on Civil Rights, *The Civil Rights Implications of the Federal Use of Facial Recognition Technology* 29 (Sept. 2024), https://www.usccr.gov/files/2024-09/civil-rights-implications-of-frt_0.pdf [https://perma.cc/D4VS-5866].

[36] *Id.* at 24–29.

to attempt to identify middle-aged white men.[37] The risks may be even greater for younger people, women, and people of color.

On top of these technical limitations, additional risk of error is introduced by human review of the FRT results. In general, humans often make errors on "face matching" tasks—determining whether two photos represent the same person, or whether a photo matches the live person in front of them—when unfamiliar with the subjects.[38] Moreover, humans are susceptible to "automation bias,"[39] over-relying on computer-generated outputs even when those outputs are unreliable. Finally, automation bias can compound the effects of confirmation bias and tunnel vision, which can lead investigators to latch onto information that confirms their initial theory and discredit information that contradicts it—even if that theory is wrong.

First, humans vary in their ability to recognize or match unfamiliar faces, and errors are on average quite common. One recent update of the Glasgow Face Matching Test, a widely used face matching assessment that asks people to decide whether paired photos represent the same person, aims to mimic the range of face matching tasks practitioners in the field perform.[40] The updated assessment incorporates higher-similarity non-matching pairs, akin to those FRT might generate, as well as variations in pose, distance, and angle similar to those involved in live face recognition.[41]

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[37] *See* Mot. Summ. J., Ex. 21 (ECF No. 95-8) (photo and demographic information of Plaintiff).
[38] *See, e.g.*, Ahmed M. Megreya et al., *The Other-Race Effect Does Not Rely on Memory: Evidence From a Face Matching Task*, 64 Quarterly J. of Experimental Psych. 1473, 1479 (2011) (finding that people were "highly error prone" when asked to pick out a match to a high-quality video still from a photo array of ten other faces, even when both were viewed at the same time, and that the "overall accuracy of matching upright, unfamiliar faces was further reduced for faces of a different race").
[39] *See generally* Raja Parasuraman & Dietrich H. Manzey, *Complacency and Bias in Human Use of Automation: An Attentional Integration,* 52 Hum. Factors 381 (2010).
[40] David White et al., *GFMT2: A Psychometric Measure of Face Matching Ability*, 54 Behav. Rsch. Methods 252, 253 (2022).
[41] *Id.*

Researchers found that, on average, people achieved only a 75.9% accuracy rate overall—and made slightly more errors for non-matching pairs, labeling them as the same person more than one in four times.[42] In other words, humans in general are simply not particularly reliable at the type of comparison Officer Jager made.

Second, people reflexively over-rely on computer outputs because of "automation bias," "a heuristic replacement for vigilant information seeking and processing" that can "lead to decisions that are not based on a thorough analysis of all available information but that are strongly biased by the automatically generated advice."[43] Automation bias lulls human users of automated technologies, such as FRT, into an over-reliance on seemingly foolproof computers, leading officers to uncritically accept the computer's returns.[44] Officers may consequently become less critical and discerning when selecting a possible match or confirming an identity, including by deferring to the similarity scores generated by the algorithm in place of their own judgment.

Finally, automation bias can intersect with, and compound, other forms of cognitive bias known to lead officers astray. Extensive research into wrongful convictions has shown that investigators are susceptible to tunnel vision and confirmation bias, which lead them to evaluate information through the lens of a theory they already believe, even if it is wrong.[45] When officers, usually early in an investigation, adopt a conclusion—such as that they have correctly identified a suspect—supporting information "is elevated in significance, viewed as consistent with the other evidence, and deemed relevant and probative."[46] In contrast, "[e]vidence inconsistent with the

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[42] *Id.* at 256.
[43] Parasuraman & Manzey, *supra* note 39, at 391.
[44] *Id.* at 391–97.
[45] *See* Keith A. Findley & Michael S. Scott, *The Multiple Dimensions of Tunnel Vision in Criminal Cases*, 2006 Wis. L. Rev. 291, 292 (2006).
[46] *Id.*

chosen theory is easily overlooked or dismissed as irrelevant, incredible, or unreliable."[47] With FRT, confirmation bias can thus lead officers to disregard evidence that points to a misidentification while crediting information that appears to confirm the system's purported match.

Officer Jager's conduct here exemplifies these well-known risks. Rather than objectively evaluating whether Mr. Killinger was in fact the person flagged by the FRT system, Officer Jager relied on the facial recognition result even when confronted with evidence that Mr. Killinger was who he said he was—and was not Mr. Ellis. Despite Mr. Killinger and Mr. Ellis having different valid licenses and different physical features,[48] Officer Jager settled on the completely speculative theory that Mr. Killinger had a "DMV hookup" who gave him a fraudulent (but valid) license.[49] As Jager explained, he was "predisposed" to disbelieve Mr. Killinger's explanation that he was a different person than Mr. Ellis,[50] instead reflexively trusting that the FRT system was "a credible source of information" and that it had identified Mr. Killinger as a prior trespasser with certainty.[51]

The circumstances of Mr. Killinger's arrest demonstrate the dangers of treating an inherently unreliable result from FRT as definitive evidence of identity. At most, an FRT result is a low-reliability investigative lead that must be independently corroborated through reliable evidence before it can support probable cause.

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[47] *Id.*

[48] Officer Jager acknowledged in his arrest report that Killinger and Ellis had different eye colors listed on their licenses, but implausibly explained away the difference by speculating that hazel and blue eyes are "by their very nature similar eye colors and are dependent upon lighting." Mot. Summ. J., Ex. 33, Arrest Report & Decl. of Probable Cause 16, 19 (ECF No. 95-10). Of course, to obtain a Nevada driver's license, Mr. Killinger and Mr. Ellis each presented themselves at a DMV office, where state employees would have seen their eyes at close range and under the same lighting conditions.

[49] Mot. Summ. J., Ex. 2, Jager Dep. 195:22–25; 196:1–7 (ECF No. 95-2).

[50] *Id.* at 210:12–17.

[51] *Id.* at 213:8–11.

II. Because an FRT Result Is Inherently Unreliable, It Cannot Supply Probable Cause.

Officer Jager asserts that probable cause for Mr. Killinger's arrest was based on the combination of the results from Peppermill's facial recognition software and a Peppermill representative's statement in a criminal complaint from the casino.[52] However, because FRT results are not determinative of identity, and the casino's criminal complaint was based solely on the faulty FRT results, those sources cannot establish probable cause either alone or in combination.

Probable cause requires a "'fair probability' that [the suspect] committed a crime." *Chism v. Washington State*, 661 F.3d 380, 390 (9th Cir. 2011). It is a "totality-of-the-circumstances" inquiry. *Id.* at 389 (citing *Illinois v. Gates*, 462 U.S. 213, 230 (1983)); *see also Brinegar v. United States*, 338 U.S. 160, 175 (1949) (probable cause rests "the factual and practical considerations of everyday life on which reasonable and prudent men . . . act"). Fundamentally unreliable information, such as an anonymous tip or the statement of a very young child, requires "independent corroboration" to amount to probable cause. *United States v. Clark*, 31 F.3d 831, 834 (9th Cir. 1994) (anonymous tip); *Stoot v. City of Everett*, 582 F.3d 910, 920 (9th Cir. 2009) (statement of very young child). Evidence that "is equally consistent with both legal or illegal activity" is likewise "not sufficient to establish probable cause." *Clark*, 31 F.3d at 835.

Facial recognition technology is not capable of providing a positive identification and is well known to produce false matches. As one court put it, "[i]nstead of being designed to produce accurate results, [the FRT algorithm] is designed to produce possibilities." *State v. Archambault*, No. 62-CR-20-5866, slip op. at 14 (Minn. 2d Dist. Ct. Sept. 13, 2024), attached as Ex. A. Another court has explained that "today's facial recognition technology may be fundamentally unreliable

[52] Mot. Summ. J., Ex. 2, Jager Dep. 66:22–67:7 (ECF No. 95-2).

due to serious flaws in the technology itself and human operator errors." *Woodruff v. Oliver*, No. 23-11886, 2025 WL 2231045, at *12 (E.D. Mich. Aug. 5, 2025) (citing ACLU amicus brief). *See also People v. Collins*, 49 Misc. 3d 595, 612 (N.Y. Sup. Ct. 2015) ("The products of polygraph technology and of facial recognition technology similarly can sometimes have value, but evidence produced by those technologies is not generally accepted as reliable by the relevant scientific communities and so cannot be admitted in trials.").

Since significantly before the arrest in this case, it has been the common understanding among experts, law enforcement agencies, and FRT vendors that an FRT search result is not a positive identification, but merely an investigative lead requiring additional independent investigation before probable cause can be established. Such warnings have been issued by the International Association of Chiefs of Police,[53] the Major Cities Chiefs Association,[54] the U.S. Departments of Justice and Homeland Security,[55] the Facial Identification Scientific Working Group,[56] the National Academies of Sciences, Engineering, and Medicine,[57] and the companies

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[53] IJIS Institute & Int'l Ass'n Chiefs Police, *Law Enforcement Facial Recognition Use Case Catalog* 3 (Mar. 2019), https://www.theiacp.org/sites/default/files/2019-10/IJIS_IACP%20WP_LEITTF_Facial%20Recognition%20UseCasesRpt_20190322.pdf [https://perma.cc/4VWF-BTJL] (a FRT search result is "a strong clue, and nothing more, which must then be corroborated against other facts and investigative findings before a person can be determined to be the subject whose identity is being sought").

[54] Mot. Summ. J., Ex. 11 14 (ECF No. 95-5); Mot. Summ. J., Ex. 7, Darcy Expert Report 19–20 (ECF No. 95-4).

[55] U.S. Dep't of Justice, Bureau of Justice Assistance, *Face Recognition Policy Development Template* 22 (Dec. 2017), https://bja.ojp.gov/doc/face-recognition-policy-development-template.pdf [https://perma.cc/SPA6-E9LQ]; Dep't of Homeland Sec., Directive No. 026-11, *Use of Face Recognition and Face Capture Technologies* 6 (Sept. 11, 2023), https://web.archive.org/web/20231002103552/https://www.dhs.gov/sites/default/files/2023-09/23_0913_mgmt_026-11-use-face-recognition-face-capture-technologies.pdf.

[56] Facial Identification Scientific Working Group, *Minimum Training Criteria When Using Facial Recognition Systems* (Oct. 22, 2021), https://fiswg.org/fiswg_min_training_criteria_when_using_fr_systems_v1.0_2021.10.22.pdf.

[57] National Academies Report, *supra* note 1, at 102.

that develop and sell FRT,[58] among other sources. This warning has also long been standard in law enforcement agencies' policies regarding use of or reliance on FRT in investigations, including policies instituted well before the wrongful arrest in this case.[59] The Las Vegas Metropolitan Police Department's FRT policy warned as early as 2019 that FRT results "are considered advisory in nature as an investigative lead only. Resulting candidate images do not establish probable cause to obtain an arrest warrant without further investigation and other facts or evidence."[60]

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[58] *See, e.g.*, *Code of Ethics*, Rank One Computing, https://roc.ai/code-of-ethics/ [https://perma.cc/G95U-7LWD] (last visited Sept. 19, 2026) ("Face recognition should not be used as the sole support of probable cause for arrest, search, or seizure of any U.S. citizen or any property. Independent evidence should be required to establish probable cause."); *Fighting Crime and Curtailing Human Bias with Face Recognition*, Cognitec, https://www.cognitec.com/news-reader/fighting-crime-and-curtailing-human-bias-with-face-recognition.html [https://perma.cc/TW69-WEGZ] (last visited Sept. 19, 2026) ("[T]he software is used as a lead generation tool only, as the starting point of an investigation that uses additional methods to find or identify the person."); *Legal Overview*, Clearview AI, https://www.clearview.ai/legal [https://perma.cc/AA9W-DGH3] (last visited Sept. 19, 2026) ("Clearview AI users are required to follow-up all search results with independent investigation.").

[59] *See, e.g.*, N.Y. State Div. of Crim. Justice Servs., Mun. Police Training Council, *Facial Recognition Model Policy* 3 (Dec. 2019), https://criminaljustice.ny.gov/system/files/documents/2026/03/mptc-model-policy-facial-recognition-december-2019.pdf [https://perma.cc/3J8Q-RP6M] ("Potential identifications made using face recognition software shall be considered investigative leads only and shall not be deemed positive identification."); Ind. Intelligence Fusion Ctr., *Face Recognition Policy* 14 (June 2019), https://web.archive.org/web/20200912125838/https://www.in.gov/iifc/files/Indiana_Intelligence_Fusion_Center_Face_Recognition_Policy.pdf ("A candidate image is an investigative lead only and does not establish probable cause to obtain an arrest warrant without further investigation."); L.A. Cnty. Reg'l Identification Sys., *Facial Recognition Policy* 6 (Sep. 2021), https://lacris.org/LACRIS%20Facial%20 Recognition%20Policy%20v_2019.pdf [https://perma.cc/F3P4-4BX6] ("Requesters acknowledge that the result of any FR search provided by LACRIS shall be deemed an investigative lead only and RESULTS ARE NOT TO BE CONSIDERED AS PROVIDING A POSITIVE IDENTIFICATION OF ANY SUBJECT. Any possible connection or involvement of any subject to the investigation must be determined through further investigation and investigative resources.") (emphasis in original).

[60] Las Vegas Metro. Police Dep't, Policy No. 5/206.19, released on August 1, 2019, pursuant to public records request at 6, https://www.muckrock.com/foi/las-vegas-317/facial-recognition-las-vegas-nv-76804/#file-803684.

Despite these widespread warnings, in the known cases across the country of wrongful arrests due to police reliance on incorrect FRT results, officers have treated those FRT results as positive identifications and failed to conduct reliable, independent investigation to confirm or disconfirm the FRT output.[61] Officer Jager erred in exactly this way, treating the FRT result as a definitive match. But the Peppermill FRT results do not supply probable cause.

Nothing in this case provided the independent corroboration that would be needed to establish probable cause. If anything, the additional information Officer Jager obtained served to dispel suspicion. When Mr. Killinger presented Officer Jager with his valid Nevada commercial driver's license and offered to provide additional identification, the more plausible explanation for the apparent discrepancy was that the FRT system had produced an erroneous result. Rather than reasonably investigating that possibility, Officer Jager adopted the far less plausible conclusion that Mr. Killinger possessed a fraudulent Class A commercial driver's license, fraudulent Peppermill's casino player's card, and fraudulent pay slips, and had either somehow provided false information to the Nevada DMV regarding his eye color and other physical attributes, or had a "DMV hookup" making false IDs for him.[62] Jumping to such a conclusion without evidence does not comport with the "reasonable and prudent" assessment required in evaluating probable cause. *See Brinegar*, 338 U.S. at 175.

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[61] *See* Lauren Yu & Nathan Freed Wessler, *More than a Dozen Wrongful Arrests Due to Police Reliance on Facial Recognition Technology*, ACLU (Apr. 14, 2026), https://www.aclu.org/news/privacy-technology/more-than-a-dozen-wrongful-arrests-due-to-police-reliance-on-facial-recognition-technology; *see also* Douglas MacMillan, David Ovalle & Aaron Schaffer, *Arrested by AI: Police Ignore Standards After Facial Recognition Matches*, Wash. Post (Jan. 13, 2025), https://www.washingtonpost.com/business/interactive/2025/police-artificial-intelligence-facial-recognition/.

[62] Mot. Summ. J., Ex. 2, Jager Dep. 195:22–25; 196:1–7 (ECF No. 95-2).

At most, Officer Jager was able to determine that Mr. Killinger looked similar to Mr. Ellis. But that is not probable cause either. *See, e.g.*, *Sornberger v. City of Knoxville*, 434 F.3d 1006, 1014–15 (7th Cir. 2006) (holding that where plaintiff bore a "generic resemblance" to suspect on surveillance footage and other facts suggested he was not the same person, court could not find probable cause existed as a matter of law); *Fairley v. Luman*, 281 F.3d 913, 915, 917–18 (9th Cir. 2002) (holding that detention procedures violated due process when officers prolonged plaintiff's detention based on warrants issued to his twin brother, noting that despite resemblance between plaintiff and his brother, their weights differed substantially and they had different driver's license numbers).[63] As Jager put it at the time, "It might be a legitimate doppelganger situation."[64]

Predictably, that is exactly what it was. FRT searches are, by their very design, prone to returning false matches who are lookalikes for the true suspect. That is because the technology is not designed to find matches, but rather to return faces that cross a threshold of *similarity* to the probe image. *See supra* Part I. This doppelgänger effect "has obvious implications for the accuracy of the identification process" following an FRT search, because it presents a witness with the task of evaluating a face that is not actually the suspect, but is substantially similar looking. *State v. Arteaga*, 296 A.3d 542, 557 (N.J. Super. Ct. App. Div. 2023). By producing faces that closely resemble the suspect, FRT can increase the risk of misidentification: human witnesses presented with photo arrays that include an innocent suspect who closely resembles the true culprit are likely to select the innocent suspect, especially if the fillers do not resemble the culprit as closely.[65] They

[63] *See also* Mot. Summ. J., Ex. 6, Nance Dep. II 28:1–6 (ECF No. 95-3) (agreeing that "looking like someone who's committed a crime is not grounds for arrest").
[64] Mot. Summ. J., Ex. 2, Jager Dep. 208:1–5 (ECF No. 95-2).
[65] *See* Dilhan Toredi & Steven D. Penrod, *Fast, Sure, and Right? Response Time and Confidence as Predictors of Accuracy Across Filler Selection Strategies and Culprit–Innocent Suspect Similarity*, Applied Cognitive Psych., Apr. 2026 at 8–10.

are also more likely to be overconfident in their mistaken identification—and investigators often erroneously assume that this confidence signals accuracy.[66]

Officer Jager's visual comparison of Mr. Killinger with the photo of Mr. Ellis effectively amounted to a grossly unreliable single-suspect show-up with a lookalike.[67] Single-suspect show-up identifications are inherently suggestive because the procedure itself communicates to the witness that law enforcement believes the person presented is the suspect. The Supreme Court acknowledged as much six decades ago, explaining that "[t]he practice of showing suspects singly to persons for the purpose of identification, and not as a part of a lineup, has been widely condemned." *Stovall v. Denno*, 388 U.S. 293, 302 (1967). Decades of empirical social science research since then has confirmed that "lineups are clearly superior to showups in terms of the lineup procedure's ability to distinguish between innocent and guilty suspects."[68]

A similar concern arises when an officer receives an FRT-generated lead and then visually compares an image of the suspect to the FRT-generated result. The officer's purported visual "corroboration may be so closely tied to the computerized face-recognition match that it lacks independence," creating an inherently unreliable procedure.[69] Moreover, the reliability of the purported identification is further undermined because the officer knows that an FRT system generated the purported match, and is therefore primed to believe a match actually exists. *See* Part I, *supra* (discussing automation bias). Indeed, empirical research demonstrates that people tend to

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[66] *Id.* at 8 (finding that while confidence in an identification generally correlated with accuracy, this was not true where an innocent suspect strongly resembled the true culprit and fillers more weakly resembled the culprit, which tended to produce high-confidence misidentifications).
[67] *See generally* Gary L. Wells et al., *Policy and Procedure Recommendations for the Collection and Preservation of Eyewitness Identification Evidence*, 44 L. & Hum. Behav. 3, 7 (2020).
[68] Wells et al., *supra* note 67, at 26.
[69] Henry H. Perritt Jr., *Defending Face-Recognition Technology (And Defending Against It)*, 25 J. Tech. L. & Pol'y 41, 59 (2021).

rate non-matching faces as more similar—and thus make more false-positive errors—when they are told that a computer algorithm has previously labeled them as the same person.[70]

This dynamic has been central to every known case of a wrongful arrest following police reliance on incorrect FRT results, with either police officers or witnesses erroneously believing the innocent individual pictured in the FRT result is a match to the suspect.[71] But far from being an independent corroboration of the FRT result, these purported identifications are tainted by the inclusion of the innocent doppelgängers produced by the algorithm. As Detroit's Chief of Police explained after acknowledging the third wrongful arrest by his department attributable to false FRT results followed by erroneous witness identifications, by moving straight from FRT result to identification procedure "it is possible to taint the photo lineup by presenting a person who looks most like the suspect" but is not in fact the suspect.[72] Detroit is not the only jurisdiction to recognize this danger. Chicago Police Department training materials on FRT explain, for example, that "some people look alike" and that "your own interpretations can be wrong."[73]

In sum, the FRT result, standing without any independent and reliable corroboration, could not furnish probable cause.

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[70] John J. Howard et al., *Human-Algorithm Teaming in Face Recognition: How Algorithm Outcomes Cognitively Bias Human Decision-Making*, PLOS ONE, August 21, 2020, at 11.
[71] Yu & Wessler, *supra* note 61.
[72] Tr. of a Video Recorded Briefing by Detroit Police Chief James White 8:3–7 (Aug. 9, 2023), https://www.aclu.org/documents/238868; *see also* Sarah Cwiek, *Detroit Police Chief Says Faulty Police Work, Not Facial Recognition, to Blame for False Arrest*, Mich. Public (Aug. 10, 2023, 6:53 AM), https://www.michiganpublic.org/criminal-justice-legal-system/2023-08-10/detroit-police-chief-says-faulty-police-work-not-facial-recognition-to-blame-for-false-arrest [https://perma.cc/26SH-VRJL] (quoting Chief White explaining that "[y]ou cannot put a facial recognition photo in a photo lineup, because it's going to generate at least a lookalike" that will taint the lineup—unless there is an independent basis to suspect the person).
[73] Laura Moy, *Facing Injustice: How Face Recognition Technology May Increase the Incidence of Misidentifications and Wrongful Convictions,* 30 Wm. & Mary Bill Rts. J. 337, 354 (2021) .

III. Municipal Liability Exists Based on RPD's Failure to Train Officers That FRT Can Be Inaccurate and by Itself Is Not Probable Cause to Arrest.

The Reno Police Department's complete failure to train its officers on the limitations of FRT and the dangers of relying on FRT results in investigations created an obvious and foreseeable risk that its officers would violate constitutional rights. RPD knew that its officers would routinely encounter and act upon the results of FRT searches, but did not train officers about the unreliability of FRT results, or the need for independent investigation following receipt of an FRT lead before developing probable cause for an arrest. That failure makes the City of Reno liable under *Monell v. New York City Department of Social Services*, 436 U.S. 658 (1978).

Monell established that a municipality may be held liable under Section 1983 when its policy, custom, or acts "inflicts the injury" cognizable under that statute, *id.* at 694, i.e., "the deprivation of any rights, privileges, or immunities secured by the Constitution and laws" of the United States. 42 U.S.C. § 1983. A municipality may be liable for a "failure to train" when "the need for more or different training is so obvious, and the inadequacy so likely to result in the violation of constitutional rights, that the policymakers of the city can reasonably be said to have been deliberately indifferent to the need." *City of Canton, Ohio v. Harris,* 489 U.S. 378, 390 (1989).

In *Canton*, the Supreme Court recognized that the need for training may be "so obvious" that a municipality's failure to provide it constitutes a "deliberate indifference" to individuals' constitutional rights, even without a pattern of prior constitutional violations. 489 U.S. at 390 n.10. The Court illustrated this principle by relying on *Tennessee v. Garner,* 471 U.S. 1 (1985), where city policymakers "kn[e]w to a moral certainty" that their officers would be required to arrest fleeing felons and had armed those officers with firearms to accomplish that task. *Canton,* 489 U.S. at 390 n.10. Because the city knew officers would regularly confront this situation, the need

to train officers on the constitutional limitations governing the use of deadly force was "so obvious" that the failure to provide such a training could properly be characterized as "deliberate indifference." *Id.*

This same reasoning applies to the Reno Police Department's use of FRT. By September 2023, RPD knew that its officers would routinely encounter and act upon the results of FRT searches. According to Peppermill's records, RPD had arrested at least 16 people, and received calls regarding issuance of citations to at least 47 others, due to purported matches by the Peppermill FRT system prior to Mr. Killinger's arrest on September 17, 2023.[74] And in addition to the large volume of FRT searches conducted by Peppermill that were generating calls for service to RPD, *see* Pl.'s Mot. for Partial Summ. J. 8-9, Non-Disputed Facts ¶¶ 10–13 (ECF No. 95), RPD *itself* had run FRT searches and used FRT results in its investigations. As early as February 2020, RPD personnel had conducted between 101 and 500 facial recognition searches using Clearview AI, a controversial FRT system that allows police to search images of suspects against a database of tens of billions of faces scraped from the internet.[75] On its own website, Clearview trumpets one of these searches, an investigation from approximately 2019 where RPD used Clearview to attempt to identify a crime victim.[76]

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[74] Mot. Summ. J., Ex. 16, Heward Decl. Ex. 1 21 (ECF No. 95-7); Mot. Summ. J., Ex. 17, Heward Decl. 29 (ECF No. 95-7); *see also* Pl.'s Non-Disputed Facts ¶ 18 (ECF No. 95) (Peppermill called RPD before issuing a citation); Mot. Summ. J., Ex. 1, Hill Dep. 75:2-13 (ECF No. 95-2) (Peppermill called RPD "every time" an individual was detained by the casino based on FRT results).

[75] Ryan Mac, et al., *Your Local Police Department Might Have Used This Facial Recognition Tool to Surveil You. Find Out Here.*, Buzzfeed News (updated Apr. 9, 2021, 8:09 PM), https://www.buzzfeednews.com/article/ryanmac/facial-recognition-local-police-clearview-ai-table [https://perma.cc/J4SJ-Z5JN]. *See also generally*, *American Civil Liberties Union v. Clearview AI, Inc.*, No. 20 CH 4353, 2021 WL 4164452 (Ill. Cir. Ct. Aug. 27, 2021).

[76] Clearview AI, *Rescuing a Minor From Her Violent Trafficker*, https://www.clearview.ai/success-stories/rescuing-a-minor-from-her-violent-trafficker [https://perma.cc/NT6D-A6MB] (last visited Sept. 14, 2026).

When law enforcement officers begin using a new technology that risks harming the public if misused, there is an obvious need to provide training to avoid those harms. *See, e.g.*, *Berg v. Cnty. of Allegheny*, 219 F.3d 261, 277 (3d Cir. 2000) ("[W]idespread computerization carries with it the ability and responsibility to institute more effective safeguards against human error than existed in the past."); *Edrei v. City of N.Y.*, 254 F. Supp. 3d 565, 581 (S.D.N.Y. 2017) (denying motion to dismiss *Monell* claim because "[e]ven in the absence of prior similar violations, the NYC [sic] knew that officers with [new, potentially dangerous technology] in the field were likely to face difficult scenarios . . . where the risk and harm of improperly using [the technology] are great–problems that could have been avoided with proper training."). In *Berg v. County of Allegheny*, for example, the Third Circuit held that poor training around the use of a computerized warrant management system created an obvious risk of misidentification leading to arrest and imprisonment, and thus the municipality could be held liable for failing to mitigate errors through training. 219 F.3d at 277 (rejecting summary judgment so a trier of fact could decide whether the county was "deliberately indifferent to [the] obvious risk" of misuse of the department's computerized warrant system).

The need for training was no less stark here. By September 2023, the dangers of unconstrained use of FRT were well known, including the inability of FRT to make positive identifications and the correlation between low-quality probe images and low-reliability FRT results. *See* Part I, *supra*. A number of wrongful arrests due to police reliance on incorrect FRT results had been widely covered in the press and highlighted in publications geared toward police[77]:

[77] Mot. Summ. J., Ex. 7, Darcy Expert Report 22 (ECF No. 95-4).

- Michael Oliver, wrongfully arrested by Detroit police in July 2019. His wrongful arrest suit, *Oliver v. City of Detroit*, No. 2:20-cv-12711 (E.D. Mich.), was publicly reported in July 2020.[78]
- Robert Williams, wrongfully arrested by Detroit police in January 2020. His wrongful arrest, which generated a false arrest suit, *Williams v. City of Detroit*, No. 2:21-cv-10827 (E.D. Mich.), was publicly reported in June 2020 in national media outlets.[79]
- Nijeer Parks, wrongfully arrested by Woodbridge, New Jersey police in February 2019. His malicious prosecution suit, *Parks v. McCormac*, No. 2:21-cv-4021 (D.N.J.), was publicly reported in December 2020 in national media outlets.[80]
- Alonzo Sawyer, wrongfully arrested by Maryland transit police in March 2022. The case was reported in national outlets beginning in February 2023.[81]
- Randal Quran Reid, wrongfully arrested by Georgia police on a warrant issued in Louisiana, in November 2022. His wrongful arrest, which generated a malicious prosecution suit, *Reid v. Bartholomew*, No. 2:24-cv-2844 (E.D. La.), was publicly

[78] Elisha Anderson, *Controversial Detroit Facial Recognition Got Him Arrested for a Crime He Didn't Commit*, Detroit Free Press (July 10, 2020) https://www.freep.com/story/news/local/michigan/detroit/2020/07/10/facial-recognition-detroit-michael-oliver-robert-williams/5392166002/.

[79] Kashmir Hill, *Wrongfully Accused by an Algorithm*, N.Y. Times (June 24, 2020) https://www.nytimes.com/2020/06/24/technology/facial-recognition-arrest.html.

[80] Kashmir Hill, *Another Arrest, and Jail Time, Due to a Bad Facial Recognition Match*, N.Y. Times (Dec. 29, 2020) https://www.nytimes.com/2020/12/29/technology/facial-recognition-misidentify-jail.html.

[81] Khari Johnson, *Face Recognition Software Led to His Arrest. It Was Dead Wrong*, Wired (Feb. 28, 2023) https://www.wired.com/story/face-recognition-software-led-to-his-arrest-it-was-dead-wrong/ [https://perma.cc/9XWE-R56B]; Press, *supra* note 13.

reported in January 2023, with further reporting in the New York Times in March 2023.[82]

- Porcha Woodruff, wrongfully arrested by Detroit police in February 2023. Her wrongful arrest suit, *Woodruff v. Oliver*, No. 5:23-cv-11886 (E.D. Mich.), was publicly reported in the New York Times and other national outlets in August 2023.[83]

Against this background of the well-known dangers of police overreliance on FRT results leading to misidentifications and wrongful arrests, RPD would have had no trouble finding policy templates to guide its formation of a policy—the U.S. Department of Justice, for example, had already released policy development templates for local law enforcement agencies on the use of FRT, as had other organizations.[84] Many other law enforcement agencies—notably including the

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[82] Kashmir Hill & Ryan Mac, *'Thousands of Dollars for Something I Didn't Do'*, N.Y. Times (Mar. 31, 2023) https://www.nytimes.com/2023/03/31/technology/facial-recognition-false-arrests.html; John Simerman, *JPSO used facial recognition technology to arrest a man. The tech was wrong*., NOLA.com (Jan. 2, 2023), https://www.nola.com/news/crime_police/jpso-used-facial-recognition-to-arrest-a-man-it-was-wrong/article_0818361a-8886-11ed-8119-93b98ecccc8d.html.

[83] Kashmir Hill, *Eight Months Pregnant and Arrested After False Facial Recognition Match*, N.Y. Times (Aug. 6, 2023) https://www.nytimes.com/2023/08/06/business/facial-recognition-false-arrest.html; Emily Palmer, *AI Led to Her Wrongful Arrest for Carjacking at 8 Months Pregnant: 'This Can Happen to Anyone of Color'*, People (updated Sep. 8, 2023), https://people.com/porcha-woodruff-arrest-ai-facial-recognition-7966714.

[84] U.S. Dep't of Justice, *Face Recognition Policy Development Template*, *supra* note 55, at 22. *See also, e.g.*, Georgetown Ctr. on Priv. & Tech., *Model Face Recognition Use Policy* (Oct. 18, 2016), https://www.perpetuallineup.org/appendix/model-police-use-policy (citing FRT policies from multiple jurisdictions). Amici do not address here the adequacy of any particular provisions in these model policies, nor suggest that a policy without associated training would be sufficient. *See* Nathan Freed Wessler, *Police Say a Simple Warning Will Prevent Face Recognition Wrongful Arrests. That's Just Not True.*, ACLU (Apr. 30, 2024), https://www.aclu.org/news/privacy-technology/police-say-a-simple-warning-will-prevent-face-recognition-wrongful-arrests-thats-just-not-true (explaining deficits in common FRT policy provisions). The salient point in this case is that RPD provided no policy or training guidance to its officers whatsoever, despite the obvious need to do so.

Las Vegas Metropolitan Police Department—had established policies or trainings on FRT well before 2023.[85]

RPD's decision to forego FRT training invited exactly the kind of obvious risk of constitutional harm that creates *Monell* liability. A district court rejected a municipal defendant's motion to dismiss on just this ground last year. There, as here, "the City entrusted its officers with unfettered use of FRT *without providing any training*, despite the known serious risk of misidentification. . . . Given the high likelihood of a misidentification leading to the violation of an individual's constitutional rights under these circumstances, Plaintiff need not allege a pattern of similar violations to state a claim for relief." *Gatlin v. Welle*, No. 4:25-CV-43-ACL, 2025 WL 2926192, at *9 (E.D. Mo. Oct. 15, 2025).[86]

Because FRT—and particularly live FRT like the system used by Peppermill's—is prone to error and necessarily places innocent people under investigative scrutiny, the misuse of FRT results could obviously lead to the false arrest of an innocent person. The need for policy and training guidance was clear.

[85] *See supra* notes 59–60 and accompanying text.

[86] The high volume of RPD arrests and calls for service based on Peppermill FRT results makes this an even easier case than *Gatlin*, putting RPD on firm notice of the need to train its officers.

CONCLUSION

For the forgoing reasons, amici urge the Court to hold that Officer Jager lacked probable cause for Mr. Killinger's arrest, and grant partial summary judgment against the City of Reno on municipal liability for failure to train.

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Respectfully submitted,

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*Motion for pro hac vice admission forthcoming

INDEX OF EXHIBITS

EXHIBIT	DESCRIPTION
A	*State v. Archambault*, No. 62-CR-20-5866, slip op. (Minn. 2d Dist. Ct. Sept. 13, 2024)