



When Facial Recognition Technology (FRT) Goes Wrong

Ryan J. Fitzgerald, PhD

Associate Professor

Department of Psychology

r_fitzgerald@sfu.ca



SIMON FRASER
UNIVERSITY

March 30, 2026



British Columbia



Canadian Tire stores in B.C. broke privacy laws on facial ID technology, privacy commissioner says

Report says stores must develop privacy management plans



[Dirk Meissner](#) · The Canadian Press · Posted: Apr 20, 2023 2:02 PM PDT | Last Updated: April 20, 2023





3/28/26, 4:16 PM



Government
of Canada

Gouvernement
du Canada

Canada.ca > [Immigration, Refugees and Citizenship Canada](#)

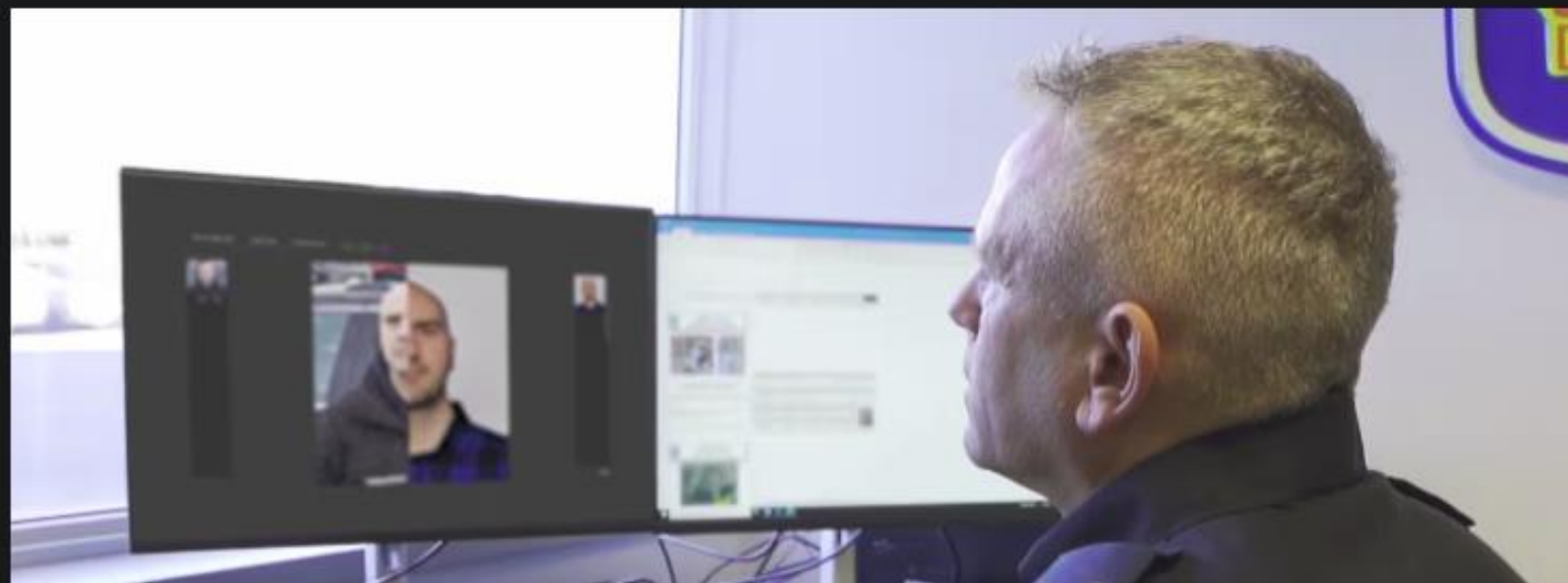
How automation technology and facial recognition is used to process Canadian passports and passport photos



Facial recognition technology gains popularity with police, intensifying calls for regulation

RCMP was previously reprimanded for using technology without public's knowledge

[Joe Bongiorno](#) · The Canadian Press · Posted: Jun 30, 2024 6:47 AM PDT | Last Updated: June 30, 2024



Case 1

Facial recognition
helped to convict
Andres Rafael Viola
for CSAM offences

November 20, 2023
Eyal Press, New Yorker



[not the actual photo]

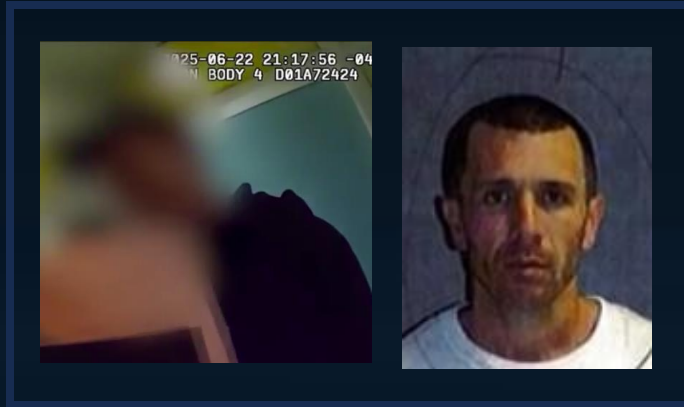
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Case 2

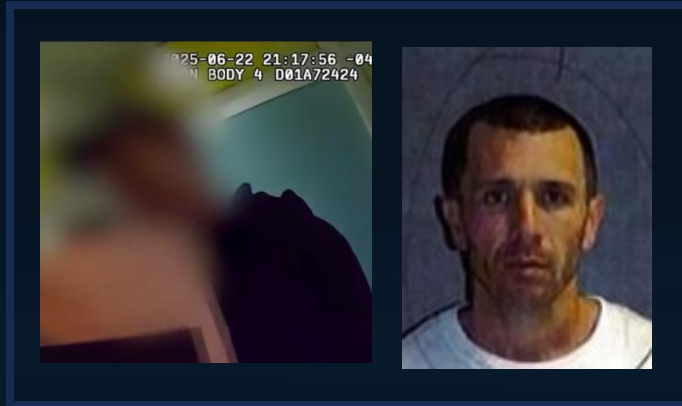
Probe image mistakenly
matched to Beau Burgess



Central Florida man arrested for fraud, theft crimes
he did not commit

Case 2

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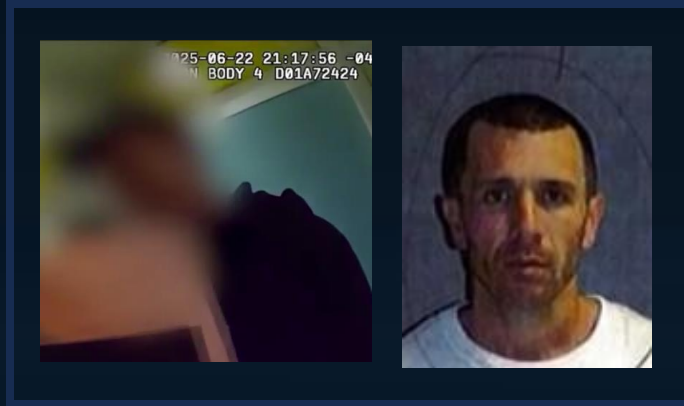


Central Florida man arrested for fraud, theft crimes
he did not commit

Justin Schecker
Feb 5, 2026

Case 2

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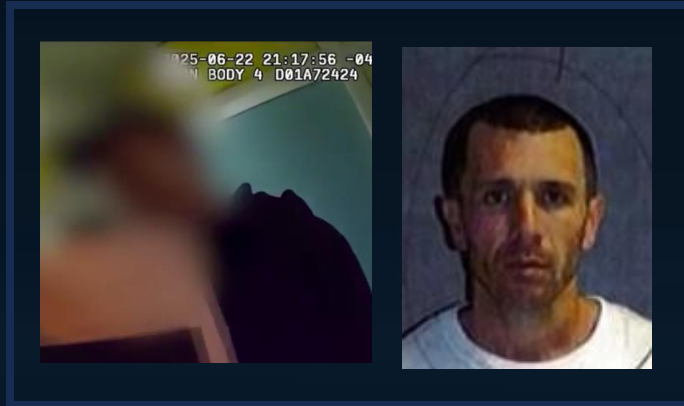


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Eyewitness ID
from photo-pack



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2. How FRT leads increase the risk of mistaken eyewitness identification
3. A list of what to look for in FRT cases



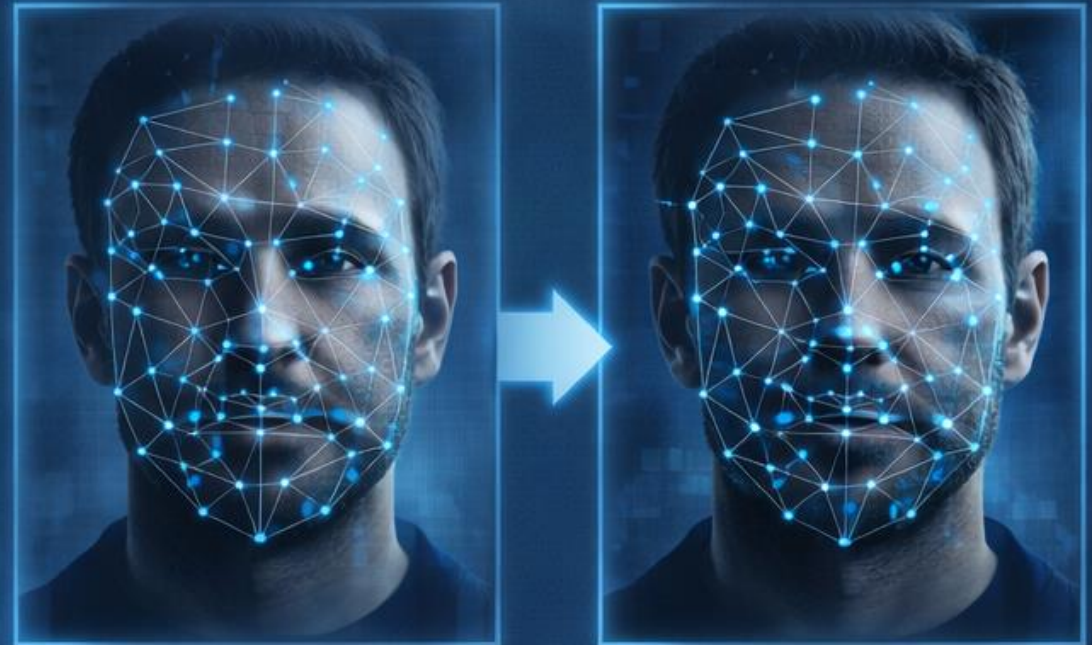
Assessing Facial Recognition Technology (FRT) cases

1. Was FRT used but not disclosed?
2. Was the probe image suitable for analysis?
3. Were the database images legally obtained?
4. When was candidate image taken? Same time as offence?
5. Did the database have other images of the candidate?
6. What is the training/experience of the human reviewer?
7. Was there a blind verification by a second reviewer?
8. Was FRT treated strictly as a lead?
9. Was eyewitness ID the sole corroborating evidence?
10. Was the suspect identified by a non-witness?

How FRT works

(ideal conditions)

Geometry of face coded
into approximately 80
nodal points



FRT as an Investigative Lead

1. Obtain a probe image
2. Submit to database
3. Use algorithm to find candidates
4. Human review of candidate list
5. Verification by 2nd human reviewer



Facial Identification Scientific Working Group

Standard Practice for the Generation and Use of Facial Comparison Results as Investigative Leads	Version 1.0	February 17, 2026
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Draft (posted for public comment until May 8, 2026)

https://fiswg.org/draft%20fiswg_generation_use_facial_comparison_results_investigative_leads_v1_20251121.pdf

Facial Identification Scientific Working Group

Draft policy

	Standard Practice for the Generation and Use of Facial Comparison Results as Investigative Leads	Version 1.0	February 17, 2026
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FRT leads are not proof of guilt

Facial Identification Scientific Working Group

Draft policy

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FRT leads are not proof of guilt

FRT leads shall include a disclaimer:

“This facial image comparison result is not a positive identification. This is an investigative lead only.

Any possible connection or involvement with any subject must be determined through further investigation.”

FRT as an Investigative Lead

Is the probe image suitable for analysis?

- 1. Obtain a probe image**
2. Submit to database
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Detroit Case 1

Jul 15, 2021

ACLU

I Did Nothing Wrong. I Was Arrested Anyway.

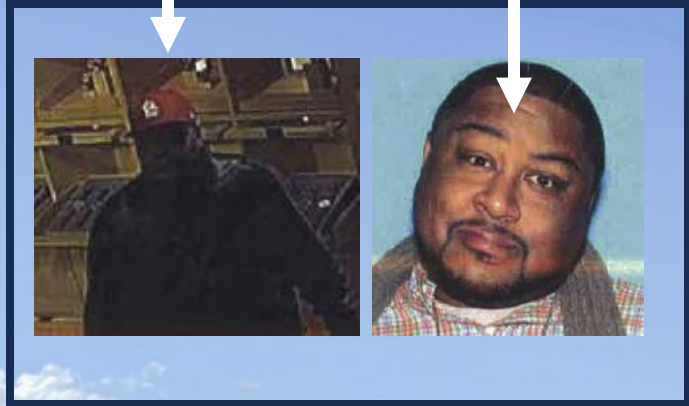
Robert Williams

ACLU client



Low quality
probe image

Expired Driver's
Licence Photo



Detroit Case 1

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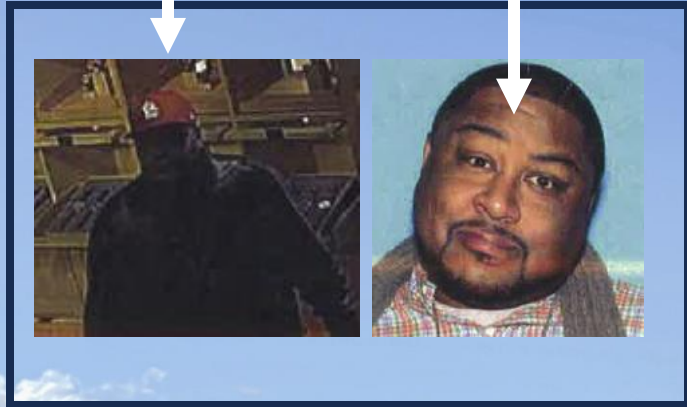
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Low quality
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Expired Driver's
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Security guard
(never witnessed the crime!)

~~Eyewitness~~ ID
from photo-pack



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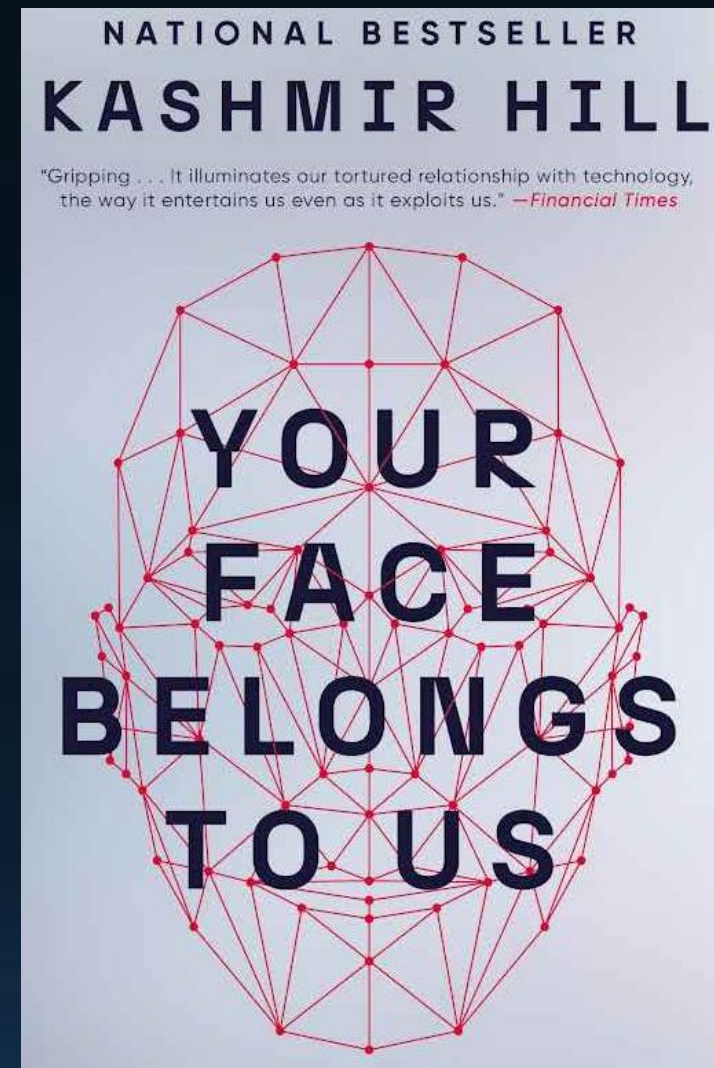


FRT as an Investigative Lead

Were database images obtained legally?

1. Obtain a probe image
- 2. Submit to database**
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Clearview built a face
database by scraping
billions of photos



(Hill, 2023)

Clearview AI to pull out of Canada and stop working with RCMP amid privacy investigation

The facial recognition firm is facing a joint investigation by Canadian privacy regulators into whether its technology, called "reckless" and "invasive" by critics, breaks Canadian privacy laws.



TORONTO STAR

July 6, 2020

FRT as an Investigative Lead

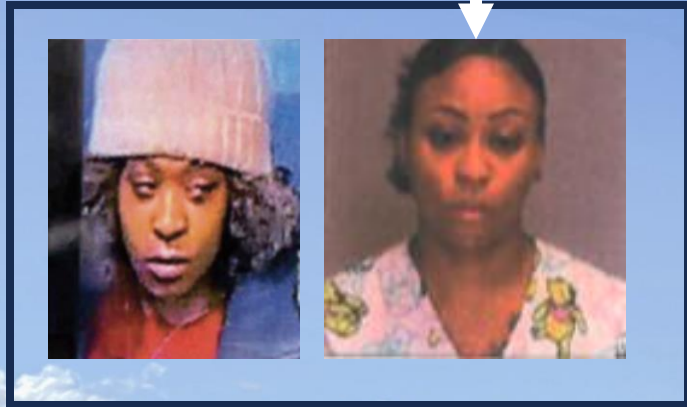
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Were database images obtained legally?

When was candidate image taken?

Detroit Case 2

Expired
driver's licence



Eight Months Pregnant and Arrested After False Facial Recognition Match

Porcha Woodruff thought the police who showed up at her door to arrest her for carjacking were joking. She is the first woman known to be wrongfully accused as a result of facial recognition technology.



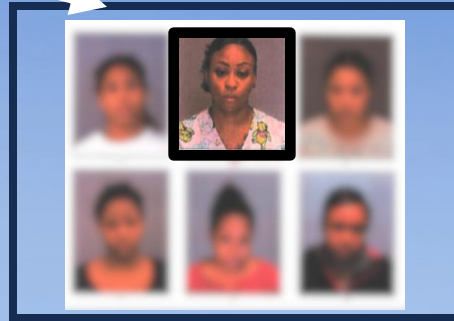
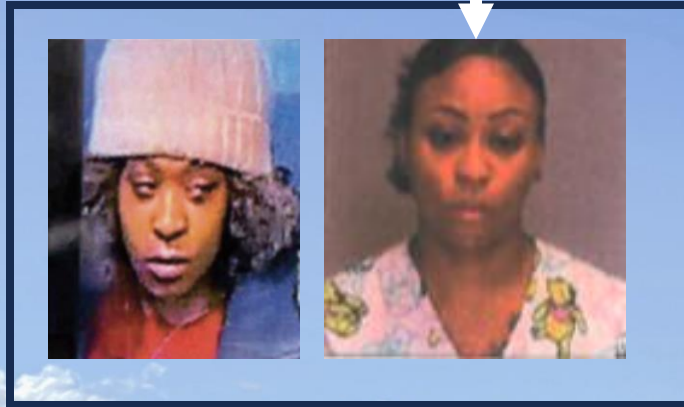
The New York Times

Kashmir Hill
August 6, 2023

Detroit Case 2

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Eyewitness ID
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Kashmir Hill
August 6, 2023

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How reliable is the model?

How reliable for candidate's racial group?

Detroit Case 3



Michael Oliver was wrongly accused of a crime based on facial recognition technology.

CBS News Elaisha Stokes
November 19, 2020

Detroit Case 3

Showup
Eyewitness ID
~~from photo-pack~~

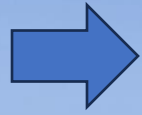


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CBS News Elaisha Stokes
November 19, 2020

Detroit Case 3

Showup
Eyewitness ID
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“It was obvious they had the wrong person.” Nyenhuis told the Free Press.

Two photographs. The left one shows a man from the waist up wearing a red Cleveland Cavaliers hoodie. The right one is a close-up of his forearms, which are heavily tattooed with various designs and text.

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CBS News Elaisha Stokes
November 19, 2020

FRT as an Investigative Lead

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What error rates are typical in face matching?

Same person or different people?

Face matching

1a



1b



3a



3b



2a



2b



4a



4b



Novices
(n = 150)

Professional
Facial Reviewers
(n = 99)

(Heyer et al., 2018)

Novices
(n = 150)

Professional
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(n = 99)

19% error rate

(Heyer et al., 2018)

**Novices
(n = 150)**

19% error rate

**Professional
Facial Reviewers
(n = 99)**

1-10/day: 24% error rate
11-50/day: 18% error rate
51+/day: 10% error rate

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Was it a professional facial reviewer?

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Was the initial decision verified?

Was the verifier blind to the initial reviewer's decision?

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Are eyewitnesses reliable?

Lab Studies

- Mistaken ID rate = 50% (Clark, 2008)

Field Studies ($N = 6734$)

- Filler ID rate = 24% (Wells et al., 2020)

Mistaken IDs in Wrongful Convictions

- 27% of 3511 USA cases
(National Registry of Exonerations, 2024)
- 28% of 89 Canadian cases
(Canadian Registry of Exonerations, 2024)

Thomas Haynesworth

Accused after victim ID'd him on the street

Four additional victims ID'd him in police lineups



Time Served:

27 years

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Appearance-based leads increase risk of innocent suspect who resembles the actual perpetrator

Street Encounter



Appearance-based leads increase risk of innocent suspect who resembles the actual perpetrator

Street Encounter



Composite Sketch



Appearance-based leads increase risk of innocent suspect who resembles the actual perpetrator

Street Encounter



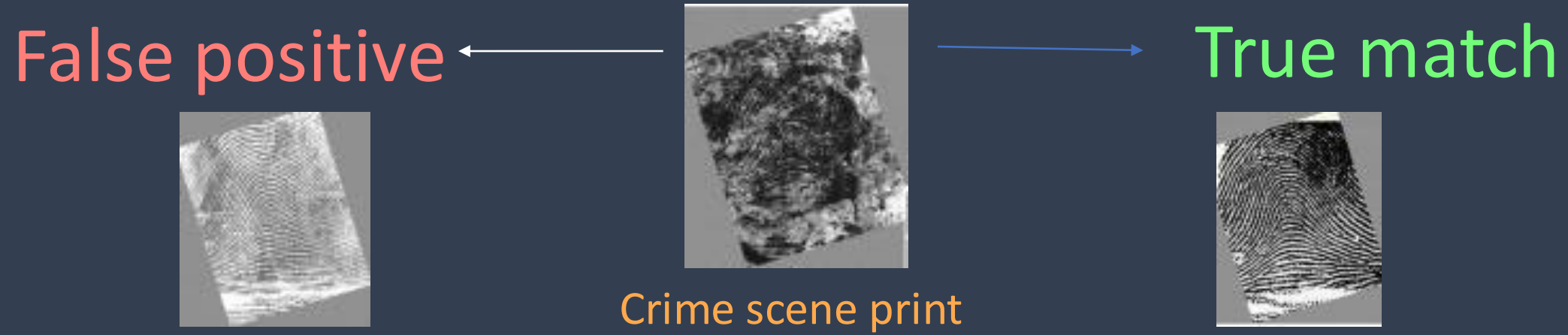
Composite Sketch



FRT Search

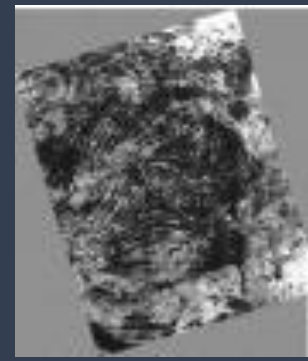


If a fingerprint leads to innocent suspect, will their face resemble the actual perpetrator's face?



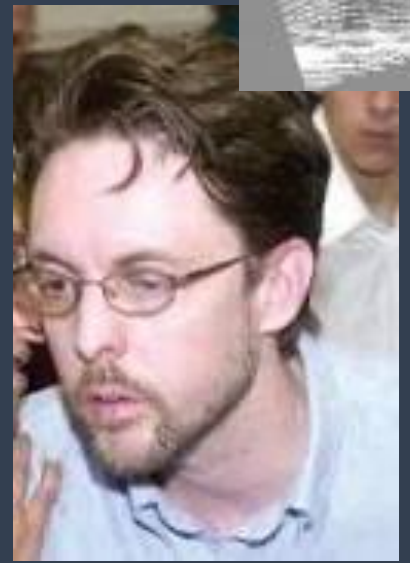
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False positive

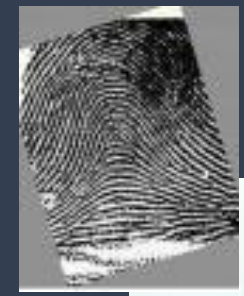


True match

Brandon Mayfield



Crime scene print

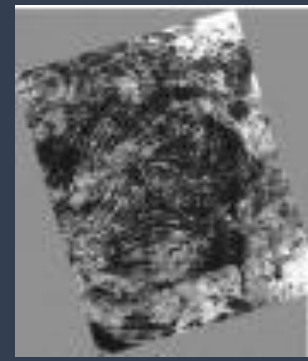


Ouhane Daoud (Madrid bomber)



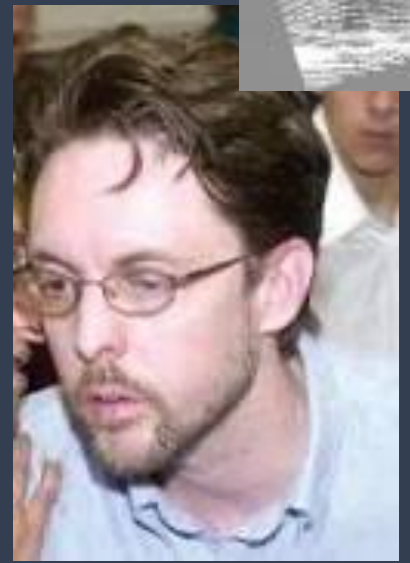
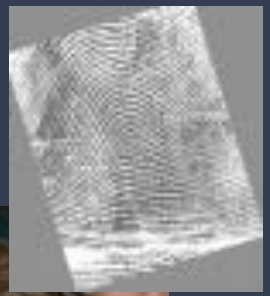
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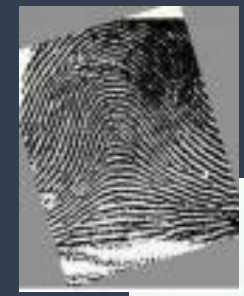


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Draft policy

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Do

Do NOT

Refer to it only as a “lead”,
not an identification

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Do NOT

Arrest based solely on the lead

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Corroborate the lead with other evidence

Do NOT

Arrest based solely on the lead

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Do	Do NOT
Refer to it only as a “lead”, not an identification	Arrest based solely on the lead
Corroborate the lead with other evidence	Corroborate <i>solely</i> with eyewitness identification evidence

Facial Recognition (2023, Directive 307.5)

1. Only permitted for serious crimes
2. Can't submit low quality images to the database
3. Can't arrest based solely on facial recognition and eyewitness identification
4. Disclaimer includes warnings about risk of error
5. Disclose date of probe image (identifying features? enhancements?)
6. Disclose date that candidate image was taken

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SIMON FRASER
UNIVERSITY

March 30, 2026

Eyewitness reliability is reduced in cases with appearance-based suspicion

Investigating suspect because of their appearance?

Yes

e.g., FRT lead from CCTV
e.g., Looks like composite sketch

Lower eyewitness reliability

No

e.g., Dog led police to house
e.g., Fingerprints at crime scene

Higher eyewitness reliability