

Milwaukee County Camera Technology Overview

**Committee on Judiciary, Law Enforcement,
and General Services**

December 9, 2025



Agenda

- Technical Background
- Milwaukee County Software and Cameras Types
- Draft Outline of Countywide Policy and Discussion



What is Artificial Intelligence?

- **Generative AI (genAI)** – Uses powerful foundation models that train on large amounts of unlabeled data and can be adapted to new use cases and bring flexibility and scalability.
- **Machine Learning (ML)** – The subset of AI focused on algorithms that can “learn” the patterns of training data and, subsequently, make accurate inferences about new data. This pattern recognition ability enables machine learning models to make decisions or predictions without explicit, hard-coded instructions.
- **Computer Vision** – A subfield of AI that equips machines with the ability to process, analyze, and interpret visual inputs such as images and videos. It uses ML to help computers and other systems derive meaningful information from visual data.

Computer vision algorithms can be trained on a wide range of tasks, some of which include:

- Image Recognition
- Image Classification
- Object Detection
- Image Segmentation
- Object Tracking
- Scene Understanding
- Facial Recognition
- Pose Estimation
- Optical Character Recognition (OCR)
- Image Generation
- Visual Inspection

Multiple Sources:

[AI vs. Machine Learning vs. Deep Learning vs. Neural Networks | IBM](#)

[What is Machine Learning? | IBM](#)

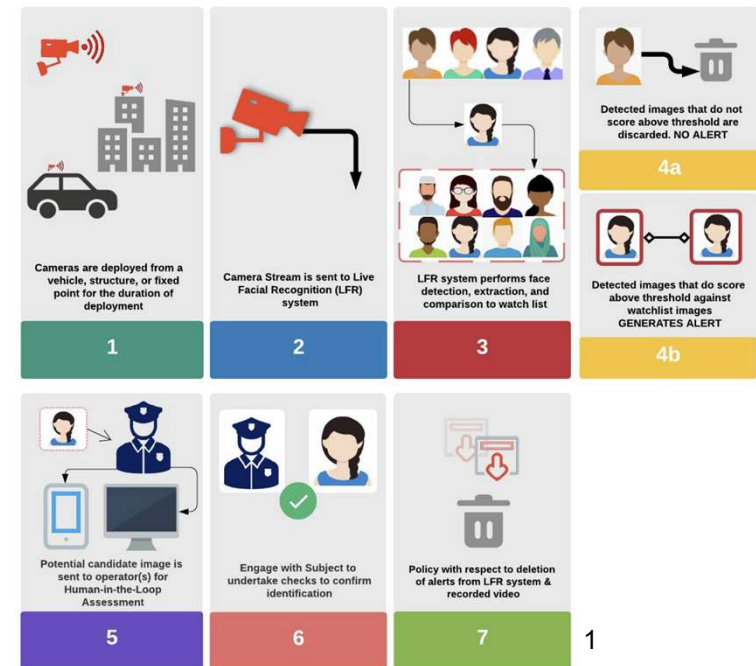
[What is Computer Vision? | IBM](#)

[What is Image Recognition? | IBM](#)



What is Facial Recognition Technology?

- Facial recognition technology (FRT) is a type of biometric software that uses algorithms to identify or verify a person's identity based on their facial features.
- FRT analyzes patterns in facial data and compares them to the facial data associated with images stored in a database.
- FRT is used in a variety of applications, from unlocking smartphones and tagging people in photos, to commercial applications, and law enforcement.
- Live Facial Recognition (LFR) is defined as passive, automated, real-time searching of facial images from a video stream against a collection of reference images, referred to as a 'watchlist' in order to elicit an immediate response.¹
Milwaukee County does NOT perform LFR.



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1. OSAC Technical Guidance Document Framework for Implementing Passive Live Facial Recognition. Jan. 2024, <https://www.nist.gov/system/files/documents/2024/01/23/OSAC-Technical-Guidance-Documents-Framework-for-Implementing-Passive-Live-Facial-Recognition-Jan-2024.pdf>.

Genetec

- Genetec is a modern, unified video management system that can scale from small deployments to large multi-site enterprise systems.
- Works with thousands of Internet Protocol (IP) cameras from various manufacturers.
- Detects motion, loitering, object left / removed, and tailgating through secured doors.
- End-to-end encryption and digital signatures for video integrity.
- Role-based security model ensuring only authorized users access cameras assigned based on business needs.
- Robust auditing trail.
- No FRT is used.



Cameras Types – General Purpose

- The County uses various types of general-purpose cameras depending on use case. This includes older Standard Definition (SD), newer High Definition (HD), and some 4K resolution cameras.
- Our cameras are IP based cameras that transmit video over the County's private network back to a County owned and controlled, centralized video surveillance system, which can provide real-time viewing and recording (Genetec – see previous slide).
- Facial Recognition Technology (FRT) is not used with these cameras.
- Cameras are deployed at multiple County locations, including:

Vel Phillips	CJF	Marcia P. Coggs
Courthouse	CRC	DOT
Fleet	Patrol	Medical Examiner
Parks	Safety Building	Zoo
Clinics	Senior Centers	



Camera Types – In-Car Cameras

- In-car video system designed for law enforcement and public safety agencies that combines high-definition video recording and real-time situational awareness into a single platform.
- Exterior pointed camera mounted on the windshield.
- Interior camera captures a knee-to-head view of vehicle occupants.
- Equipped with infrared for low-light / night recording and wide panoramic view. 4K cameras capture details and are capable of reading vehicle license plates.
- Mobile automatic license plate recognition (ALPR) capable devices that enables real-time alerts for stolen vehicles, warrants, and situational awareness before an officer approaches a vehicle. Accomplished through integration with Flock (see next slide).
- Helps solve crimes faster and with fewer resources.
- DUI and arrest documentation.
- Officer safety and accountability.
- No FRT is used.



Camera Types – Flock Safety Falcon

- The **Flock Safety Falcon** camera is a high-tech, solar-powered, automatic license plate reader (ALPR) designed for 24/7 monitoring. ALPR functionality is integrated with MCSO in-car cameras (see previous slide).
- Captures and identifies license plates from passing vehicles including vehicle plate, make and model, color, after market modifications (e.g., bumper stickers, roof racks).
- Metadata captured includes timestamp, GPS location, direction of travel, confidence score, and a high-resolution snapshot of the rear of the vehicle.
- The camera is solar powered with a battery backup, which removes the need for hardwired power.
- Encrypted cellular transmission to Flock hosted servers where data is stored in a CJIS-compliant environment.
- Sends data and snapshot, no live video streaming.
- No FRT is used.



Camera Types – Flock Safety Condor

- The **Flock Safety Condor PTZ** camera is a next-generation, solar-powered camera designed to provide live and recorded video with minimal infrastructure.
- Continuous video feeds, both live and stored for real-time monitoring and post-incident review.
- Uses advanced video analytics to detect and classify activity, helping law enforcement identify threats and respond faster to incidents and criminal activity.
- Supports both direct power and optional solar powered deployments.
- Data is encrypted and stored securely, with access limited to authorized personnel.
- No FRT is used.



Camera Types – Camera Trailer

- Generator and solar powered portable system designed for rapid deployment.
- 4 camera deployment with a telescoping Mast 15-20 feet with 360-degree rotation.
- Supports real-time viewing and storing video recordings.
- Only authorized individuals can view or retrieve video, which is stored locally and encrypted.
- No FRT is used.



Camera Types – Body Camera

- Body Cameras are designed for law enforcement and public safety professionals and are used to promote transparency, accountability, and officer safety.
- 5-megapixel sensor for clearer and more detailed video with a 160° field of view.
- Full shift battery.
- GPS tracking and live stream capable.
- CJIS-compliant cloud-based storage and evidence management system.
- No FRT is used.



Camera Types – Booking Room Cameras

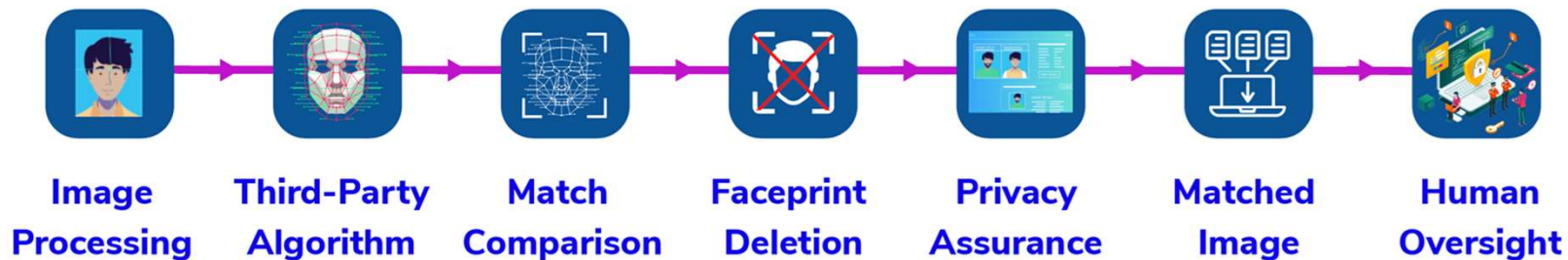
- Booking Room cameras are specialized systems designed to capture high-quality, standardized photographs of individuals during the arrest intake process.
- National Institute of Standards and Technology (NIST) compliant photos using digital camera, grey background, color printer and software.
- Captures intake photos, scars, marks, and tattoos.
- Integrates with Correctional Management system.
- High-quality photos that are good candidates for suspect facial recognition comparison. See next slide for further details.



PROPOSED Facial Recognition Software

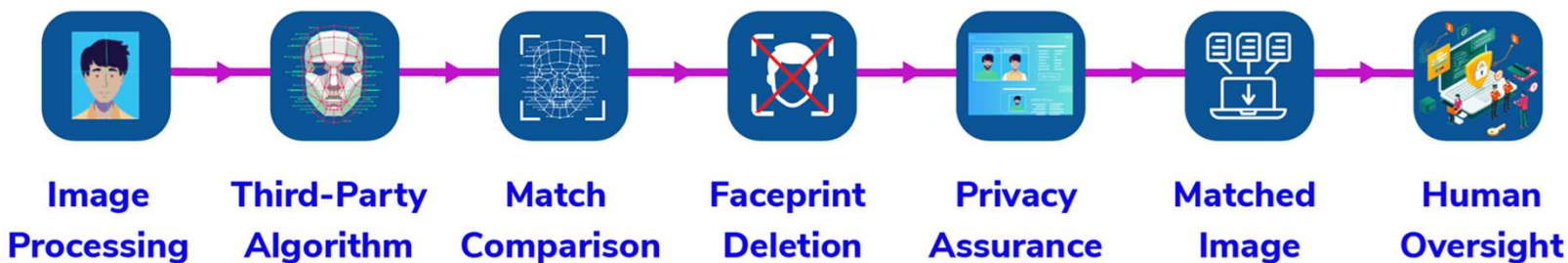
MCSO is evaluating the **PROPOSED** use case.

- Booking images compared against a law enforcement-sourced database (e.g., arrest, charge, and booking data, convictions, probation and parole, active felony warrants, sex offender registry entries, and records associated with missing or trafficked persons).
- No biometric identifiers, biometric data, or faceprints are accessed, stored, or transmitted.
- Searches are private to the authorized agency user.
- All access is logged and immutable for legal integrity.
- Data is not sold to third-parties.
- Compliant with US state and federal laws, NIST standards, and other international standards (e.g., GDPR, UK DPA, Quebec's 2022 privacy law, the European AI Act, etc.).



PROPOSED Facial Recognition Software

Permitted Uses	Prohibited Uses	Basic Principles
Identifying individuals linked to active investigations	Mass surveillance or indiscriminate tracking	FRT is a lead generation tool, not a sole basis for enforcement action.
Identifying missing persons, victims, witnesses, or unidentified deceased persons	Automated real-time identification without human review	Matches must be confirmed by trained human analysts and corroborated evidence.
Supporting field identifications (with human oversight)	Sole reliance on FRT for arrests or search warrants. Milwaukee County will not charge a case based solely on FRT.	Agencies are encouraged to maintain an auditable review process. See next slides on proposed County policy.
Mitigating imminent threats (terrorism, active violence, etc.)	Targeting based on protected characteristics (race, gender, religion, disability, etc.)	
Assisting forensic and investigative processes		



Camera Types – Summary

Camera Type	Storage Location	Sharing	FRT Enabled
General	Genetec – CJIS-Compliant Local Milwaukee County Network and Storage	Video Sharing Via Formal Request Process to MCSO	No
In-Car Cameras	CJIS-Compliant Vendor Cloud Storage	Video Sharing Via Formal Request Process to MCSO	No
Flock Falcon (ALPR)	CJIS-Compliant Vendor Cloud Storage	Hi-res Snapshot and Metadata Open to Multiple Law Enforcement Agencies	No
Flock Condor	CJIS-Compliant Vendor Cloud Storage	Video Sharing Via Formal Request Process to MCSO	No
Camera Trailer	Encrypted Local to Camera Trailer Computer	Video Sharing Via Formal Request Process to MCSO	No
Body Cameras	CJIS-Compliant Vendor Cloud Storage	Video Sharing Via Formal Request Process to MCSO	No
Booking Room Cameras	On-Premise Records Management System – CJIS-Compliant Local Milwaukee County Network and Storage	Hi-res Snapshot and Metadata	PROPOSED (previous slides)

Draft Outline of Countywide Policy

Purpose

- This policy governs Milwaukee County's use of Facial Recognition Technology (FRT) to ensure its application enhances public safety while upholding the constitutional rights and civil liberties of all individuals in Milwaukee County.

Scope

- This policy applies to all County personnel, contractors, and authorized third-party vendors who access or utilize FRT in the course of official duties.

Authorized Uses

- Only law enforcement. No other department is authorized to use FRT. If another department believes they have a legitimate use case, the policy would be reviewed.
- Law enforcement may only use FRT for:
 - Identifying suspects in serious criminal investigations, including violent felonies and threats to public safety.
 - Assisting in the identification of missing persons, unidentified deceased individuals, or witnesses.
 - Verifying identity in secure facility access or resident/occupant processing.
 - Supporting investigations with judicial oversight, such as a warrant or court order.



Draft Outline of Countywide Policy

Prohibited Uses

- Real-time surveillance of public spaces without a court-issued warrant.
- Monitoring constitutionally protected activities, including protests, religious services, or political gatherings.
- Predictive policing, racial profiling, or targeting individuals based on protected characteristics.
- Immigration enforcement, unless explicitly authorized by federal or state law.

Accuracy and Bias Mitigation

- FRT systems must meet or exceed National Institute of Standards and Technology (NIST) accuracy standards.
- All personnel using FRT must complete certified training, on an annual basis, on FRT's capabilities, limitations, and ethical use.
- Internal audits of FRT systems.
- Performance metrics and evaluations disaggregated by race, gender, and age.



Draft Outline of Countywide Policy

Data Management

All biometric data must meet Criminal Justice Information Services (CJIS) requirements:

- Encrypted in storage and during transmission.
- Retained only as long as necessary for investigative purposes (default is 90 days unless extended by legal requirement).
- Deleted upon case closure or expiration of retention period.
- Data sharing with external agencies must be legally justified, documented, and approved by command staff.



Draft Outline of Countywide Policy

Oversight and Transparency

- All FRT use must be pre-approved by a supervising officer and documented in the records management system.
- Judicial authorization is required for any real-time or mass surveillance deployment.
- Law enforcement departments will conduct annual audits to assess algorithmic fairness across demographic groups, identify any performance disparities, and ensure compliance with civil rights and privacy standards.
- Each law enforcement department shall also, on an annual basis, issue a public report with the following:
 - Review of FRT purchases and usage.
 - Number of FRT searches conducted.
 - Number of positive identifications and false matches.
 - Any complaints, investigations, or disciplinary actions related to FRT use.
- This policy and related procedures shall be made publicly available on the County's web site.
- The County shall review the policy annually and update it as necessary to reflect changes in law, technology, or community standards.



Questions?





**MILWAUKEE
COUNTY**