

Automated Surveillance

AI Surveillance = FRT (Facial Recognition Technology)

- **AI Surveillance:** Refers to the use of artificial intelligence systems to monitor people, activities, and objects in public or private spaces.
- **Facial Recognition Technology (FRT):** A significant aspect of AI surveillance, used to identify or verify individuals based on their facial features. This technology is increasingly deployed in various sectors, from security and law enforcement to airport security and smart cities.

Object Recognition → Comes from computer vision

- **Object Recognition:** Part of computer vision, which allows AI to detect and identify specific objects within images or video streams. This ability extends beyond facial recognition and includes identifying vehicles, weapons, or specific behaviours in surveillance footage.

176 countries are using AI for surveillance

- AI-powered surveillance tools, including facial recognition and object recognition, are being adopted globally by **176 countries**, either by governments or private sectors. This usage spans law enforcement, national security, and smart city initiatives, with varied levels of privacy concerns depending on the region.

Facial recognition system – Digi Yatra

- **Digi Yatra:** An Indian government initiative that uses facial recognition technology for airport security and seamless passenger

travel. Passengers can enter airports using face scans rather than traditional tickets or IDs, exemplifying AI-driven biometric systems for surveillance.

Smart Policing → Past data will be sent & analysed

- **Smart Policing:** Involves using AI and data analytics to improve law enforcement efficiency. Historical crime data, combined with real-time data feeds, is analysed using machine learning algorithms to predict potential crimes and identify criminal hotspots. This predictive policing is aimed at proactive law enforcement but raises concerns around privacy and bias.

China is a major driver of AI surveillance

- **China's Role:** China is a global leader in AI surveillance technology, both in development and deployment. The Chinese government uses extensive surveillance networks domestically, but it also exports these technologies worldwide.

Chinese technologies

- Companies like **Huawei**, **Hikvision**, **Dahua**, and **ZTE** are key Chinese players in AI surveillance technology. They provide a range of tools, from facial recognition cameras to network infrastructure, often at competitive prices, allowing widespread adoption.

China's Belt and Road Initiative (BRI)

- **Belt and Road Initiative (BRI):** A global development strategy launched by China, aiming to improve trade routes and infrastructure. Out of the **63 countries** involved in the BRI, **36** have also adopted Chinese AI surveillance technology, often as part of

broader infrastructure deals.

Chinese supplies the most surveillance technology

- Despite concerns over privacy and potential misuse, **Chinese surveillance technology** is widely used, even in **Western countries**. Chinese firms have become prominent suppliers due to their affordable, scalable solutions in AI-driven monitoring systems.

Japan's NEC provides surveillance technology

- **NEC**: A Japanese multinational, also involved in the surveillance industry, has provided its AI-powered surveillance systems to **14 countries**, offering an alternative to Chinese technology but following a similar global expansion pattern.

Soft Loans

- **Chinese surveillance tech is affordable**, and **India also buys it**.
- The **USA provides surveillance tech** to **32 countries**.
- **IBM creates AI models** for surveillance; **Palantir and CISCO** also contribute.
- **Liberal democracies** like **France, Germany, Israel, and Japan** are spreading these technologies.
- **Ethnocracies** have **ethnicity-based governance** and aren't **liberal democracies**.

- **Japan** has **multiple political parties collaborating**.
- **Liberal democracies** foster **competition**, leading to better governance.

Liberal Democracies:

- **Major AI surveillance users.**
- **51% of advanced democracies** use AI surveillance.
- **37% of authoritarian states** use AI surveillance.
- **Governments often deploy surveillance systems** without full understanding.
- **Delhi** increases cameras for better surveillance due to pressure.
- The **Great Firewall of China** is a **mass surveillance** example.
- **Saudi Arabia and Israel** also use extensive surveillance.
- **Machine Learning aids mass surveillance** by generating **data lakes**.
- **Edward Snowden** exposed the **PRISM project**.
- **Surveillance reinforces repression** to achieve political goals.

FRT Issues:

- **Bias and errors** are problems.
- **Models need retraining** as facial data changes.
- **FRT is probability-based** and can **violate rights**.
- **Machine learning magnifies crime reporting** from high-crime areas.
- **Project Lumen** exposes **government surveillance requests** to social media platforms.