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Several local governments in S. Korea are building AIs using CCTV data without subjects' consent

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This comes amid revelations that the Ministry of Justice handed over millions of photos obtained in the immigration screening process to private sector AI developers

Workers in a control office in one municipal government's CCTV operation room. Photo unrelated to the content of the article. (Hankyoreh archive photo)

As controversy rages over the Ministry of Justice using photographs of travelers' faces obtained during immigration procedures to build an artificial intelligence identification and tracking system without data subjects' consent, it has been confirmed that similar projects are underway in several local governments around Korea.

These projects operate under the pretext of using AI trained with publicly obtained data for public purposes such as policing and disease control. This has led to concerns over the potential abuse or misuse of personal information that the release of sensitive biometric data to the private sector entails, as well as infringement on privacy stemming from real-time remote surveillance systems.

There is also the hidden risk that private development firms who have been given access to public data could misappropriate such data.

Municipalities flock to make use of artificial intelligence facial recognition

An investigation by the Hankyoreh on Monday found that the city of Bucheon in Gyeonggi Province plans to implement a "smart epidemiological investigation system" using CCTV cameras within the city starting in January 2022. When a confirmed case of a disease such as COVID-19 appears, the AI algorithm will analyze footage gathered by the CCTV control center and track the person's movements, instances of close contact, and whether they were wearing a mask. Up to 10,000 cameras installed for crime prevention will be used for this project.

Bucheon has more CCTV cameras than other municipalities, which increases the amount of data collected. In a report released at the beginning of this year, Bucheon stated, "As of June 2020, Bucheon has 123 CCTV cameras per 1 square kilometer, which satisfies the

conditions for carrying out [this project] to an extent that no other Korean city can follow."

A city official told the Hankyoreh that "a [private] company that specializes in building data sets has recently completed the filming of training videos and is now developing an algorithm."

Similar projects are underway in other regions as well.

For instance, the city of Ansan in Gyeonggi Province plans to launch a pilot program next year for a system that detects child abuse in real-time by using CCTV in daycare centers within the district. If the CCTV captures scenes of abuse or signals such as expressions of negative emotions by children, the algorithm will detect this and send a notification to both City Hall and the director of the daycare center.

"We will begin developing the system early next year after holding an orientation session for parents, directors and teachers from city daycare centers by the end of the year," Ansan stated in a press release last month. "After running a pilot next year, we plan to expand the project to all daycare centers in Ansan from the second half of 2023 (July – December)."

Police in Jeju are pursuing a pilot project that involves using AI CCTV for personal protection. In this project, CCTV cameras capable of facial recognition and intruder detection are installed close to the homes of persons subject to protection. If a certain person is found loitering in the area, the system automatically sends a photograph to the protected person and the police's 112 situation room. The Korean National Police Agency plans to expand this system nationwide starting next year.

Concerns growing over Big Brother-style surveillance society

These projects are based on disclosing public data to private companies, primarily because the effectiveness of AI algorithms depends on how close the data used to train them matches the real world. It is both expensive and time-consuming to obtain private data with the permission of individual data subjects.

The problem, however, is that a large number of unspecified personal information can be unknowingly handed over to the private sector. In February, Bucheon wrote in a project proposal request: "Various AI algorithms are being developed, but in many cases data to study these algorithms are lacking so it's unsuitable for use in practice."

The city continued, saying, "[We are planning] to build a dataset [for training the AI] to advance the AI algorithm based on actual CCTV footage data."

This would mean handing over this sensitive data to private companies without first obtaining permission from the people appearing in the CCTV footage. Until the end of this year, however, the algorithm will only be developed with footage that has been produced, while actual CCTV footage will be used starting next year.

According to Bucheon's city government, using CCTV footage to train AI algorithms shouldn't be seen as a problem since the images obtained through CCTV are used only after a process of de-identification of individuals. An official from Bucheon told the Hankyoreh: "Although an unspecified number of people [appear in the footage], when the footage is analyzed, the faces of individuals will be blurred."

However, whether it's possible to disguise or hide biometric information such as faces is controversial even within the government. The Personal Information Protection Commission and the Ministry of Health and Welfare published guidelines on the use of medical health data last September. Their guidelines mentioned that they had deferred judgment as to whether biometric data can be processed anonymously, adding that "[Biometric data] can only be used with the data subject's consent."

There are also fears about the possibility of remote monitoring. This is because CCTVs equipped with a remote identification function could be used to surveil and track the private lives of individuals. Chang Yeo-Kyung, executive director of the Institute of Digital Rights, said, "There is no guarantee that a system designed to track an unspecified number of individuals will not be diverted for private surveillance purposes."

The city of Bucheon aims to use the dataset built through this project not only for disease control measures but also for "the overall development of AI technology," according to its business plan.

"We will establish and open up AI datasets based on real data, upgrade AI learning algorithms, and create and expand a foundation for the continuous advancement of AI data analysis systems," it wrote.

In other words, there is an alternative purpose beyond the establishment of a disease control and prevention network.

By Cheon Ho-sung, staff reporter

consent, surveillance, revelation, controversy, abuse, infringe, carry out, hand over, guidelines, overall

Do you mind being surveilled?

What is your opinion of Bucheon's plan to implement a "smart epidemiological investigation system?"

Would you send your child to a surveilled daycare center?

Do you trust local governments with your personal information?

Have your rights ever been infringed on?

What is opinion of vaccine mandates?

What is a controversial topic among you and your friends?

What guidelines of "living with COVID" annoy you?

_____ was a revelation to me.

Overall, I _____.