LG CNS Develops AI Storage Media Detection Technology to Prevent Information Leakage

Jung So-yeon | 승인 2020.05.13 09:49

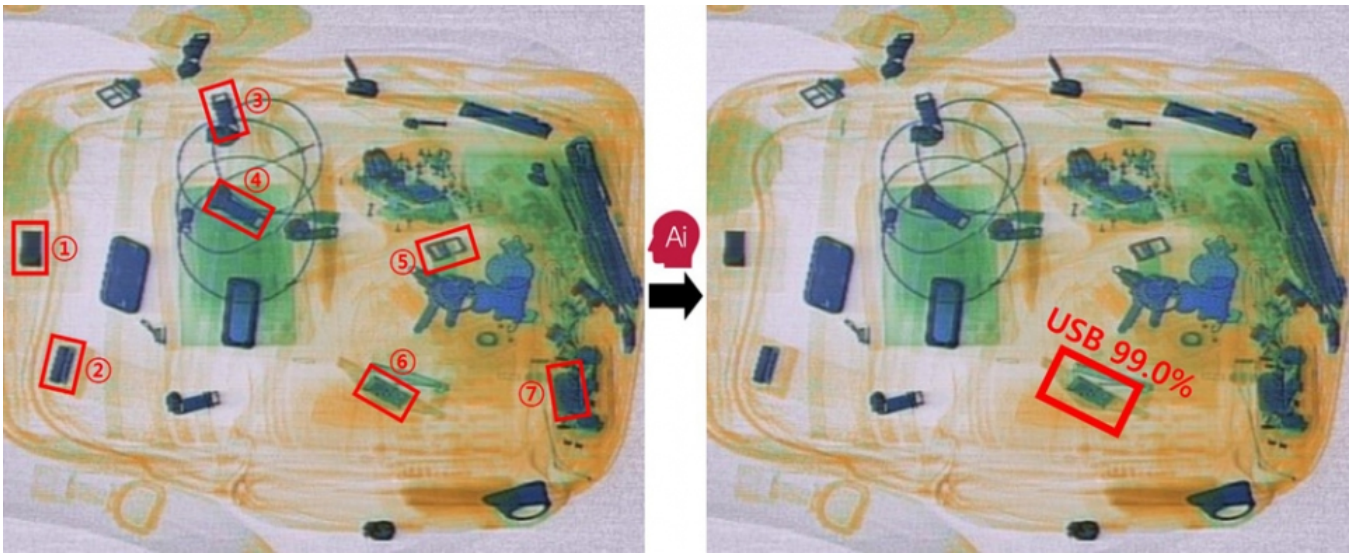
AI Storage Media Detection Technology analyzes X-ray photos at LG Display Research Center in LG Science Park and delivers them to security personnel. (Courtesy of LG CNS)

LG CNS said on May 13 that it has developed an "AI storage media detection technology" that combines AI with X-ray equipment to prevent leaks of information by companies and institutions.

It is a technology in which AI analyzes photos of bags and coats taken by X-ray equipment installed at various building entrances and finds storage media or electronic devices.

The AI storage media detection technology identifies all storage media in bags and coats in 0.3 seconds. When AI detects hidden storage media, it displays the storage media name and probability according to the judgment result, such as "USB 99.0%" and "Memory Card 85.5%" on the monitor.

It also stops the X-ray search stand belt. "Memory Card 85.5%" means that the identified storage medium is 85.5% likely to be a memory card, and the other storage medium is 14.5%.



There is a USB in the picture on the left. Find it. (picture on the right) AI finds USB in 0.3 seconds. (Courtesy of LG CNS)

In the past, security personnel placed at the entrance visually inspected X-ray photos, which were inefficient in terms of reading time and accuracy. If new security personnel were deployed, a process was needed to educate them on how to read X-ray photos.

"It has learned more than 50,000 images of various storage media to recognize AI's X-ray photos," the company said. "As a result, eight types of storage media such as USB, hard disk, memory card, laptop, tablet PC, smartphone, camera, and e-book can be read, and the reading accuracy is 99%."

In-bag notebooks, hidden in pouches, or storage media mixed with earphone strings, which are difficult to identify with human eyes, are also differentiated by AI, which greatly reduces the efforts of security personnel.

The AI storage media detection technology can learn storage media images that pass through X-rays even during operation. LG CNS plans to increase its accuracy of readings by nearly 100 percent in the future and also increase the types of readable storage media.

The company is putting AI X-ray image analysis technology into research institutes and factories that require thorough security. LG Display's Magok Science Park research center and Paju plant, LG Chem's Seoul headquarters and Ochang plant are using the technology.

In the first half of next year, the technology will also be applied to the Incheon International Airport immigration gate.

"The ratio of using storage media as a means of leaking corporate information is the highest. In response, LG CNS developed a storage media detection technology that incorporates AI technology," said Ha Tae-seok, managing director of LG CNS DT Optimization operations. "By intelligentizing X-ray search, we will be able to improve the detection rate of security leaks, minimize human error and streamline monitoring operations."

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