



AI Assist Security Inspection

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Business Background

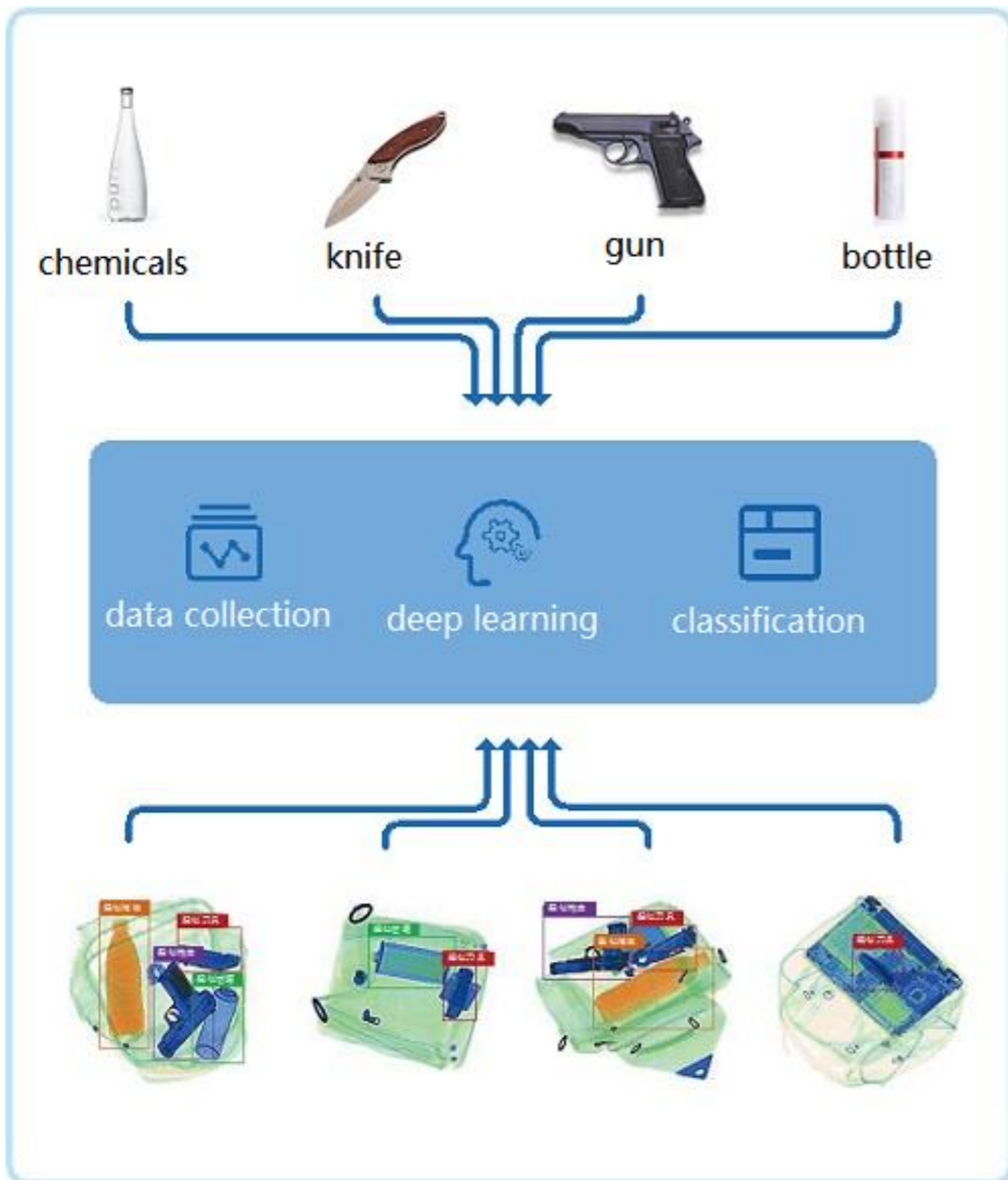


**security inspection
by human is high
const**

The investment in security inspection is not only the purchase of security equipment, but also the corresponding security personnel. With the increase of testing methods and the increasing complexity of security inspections, the number and quality requirements of security personnel have also increased, resulting in increasing security inspection costs.

**security inspection
by human is
unreliable**

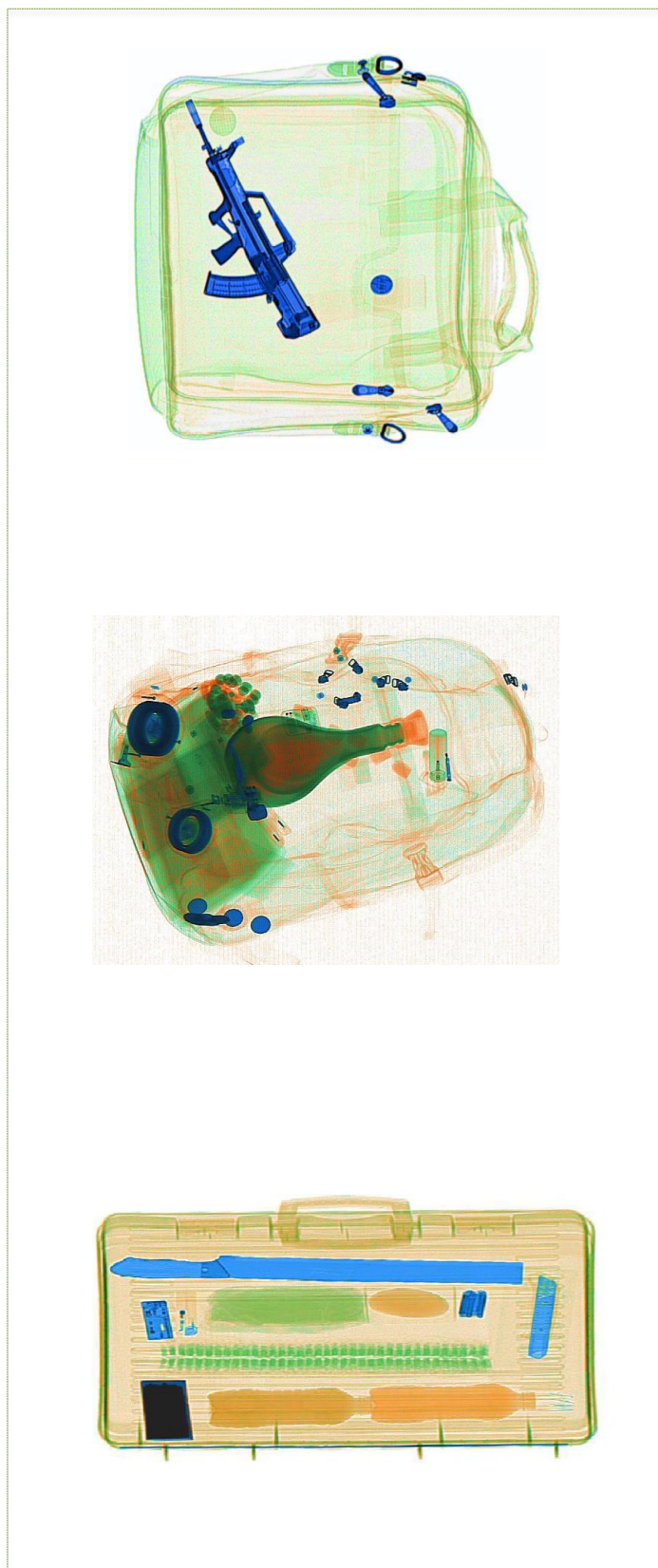
The number of items processed by security inspection every day is large, and it is necessary for the staff to judge whether there are contraband items in a short period of time. The subjectivity of the judgment of the person is easy to cause a missed judgment or a wrong judgment when the security inspector is tired.



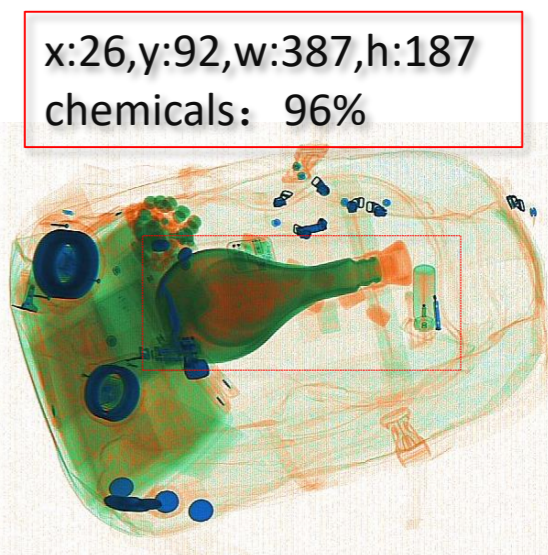
Solution

- ① Label the image output by the x-ray security inspection machine to identify the contraband contained in the image.
- ② Using the supervised learning, training the deep neural networks by label image.
- ③ converted the screen to rtsp stream. algorithm performs target detection on the video stream. When the contraband is found, the target is framed and alarmed.

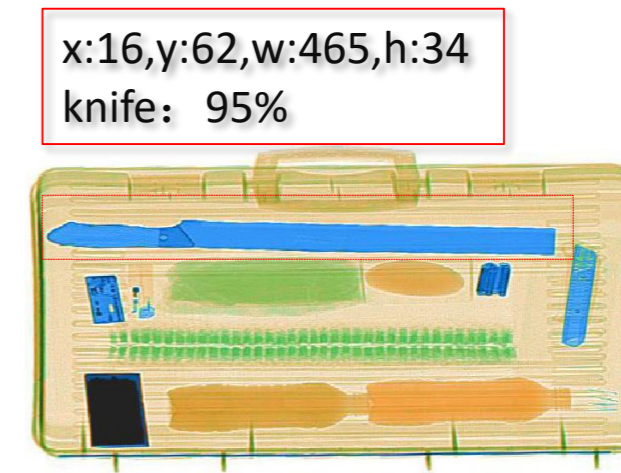
Product Description



x:16,y:22,w:287,h:387
gun: 95%

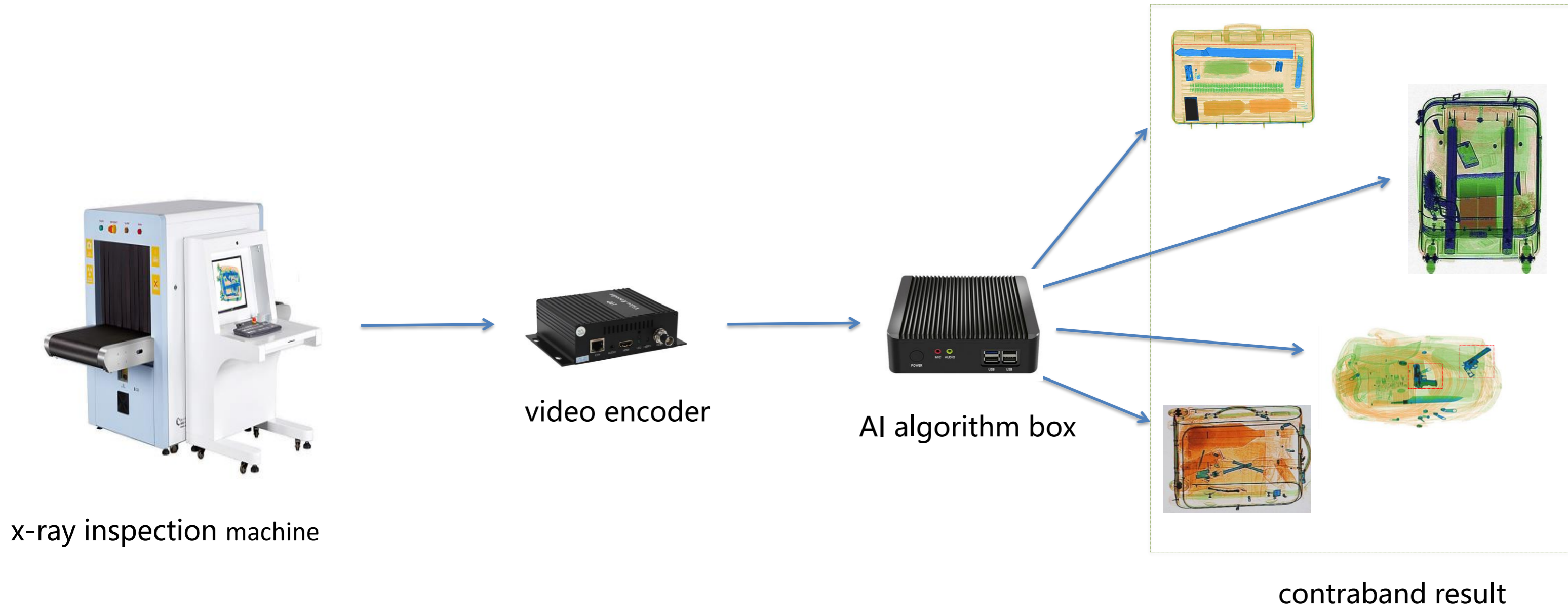


x:26,y:92,w:387,h:187
chemicals: 96%



x:16,y:62,w:465,h:34
knife: 95%

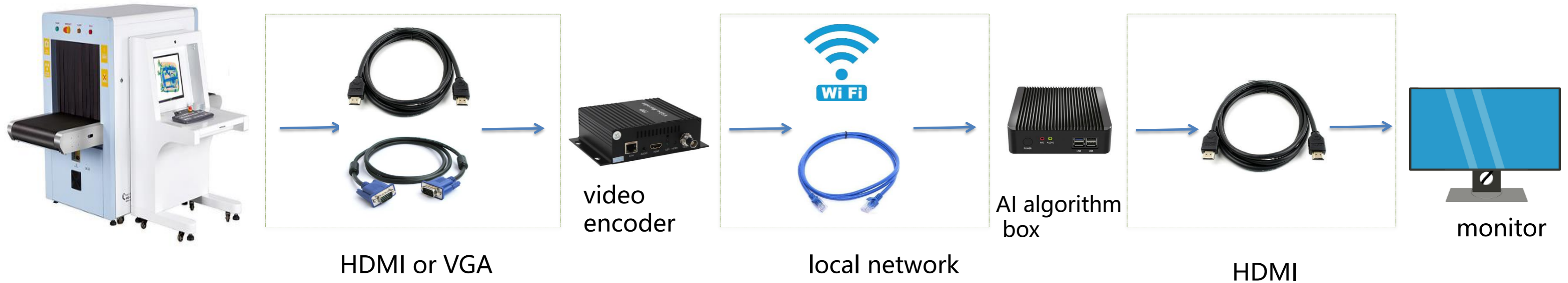
AI automatically recognizes contraband, which can effectively reduce the work intensity of security personnel, reduce the dependence of security inspection on people, and improve the efficiency of security inspection.

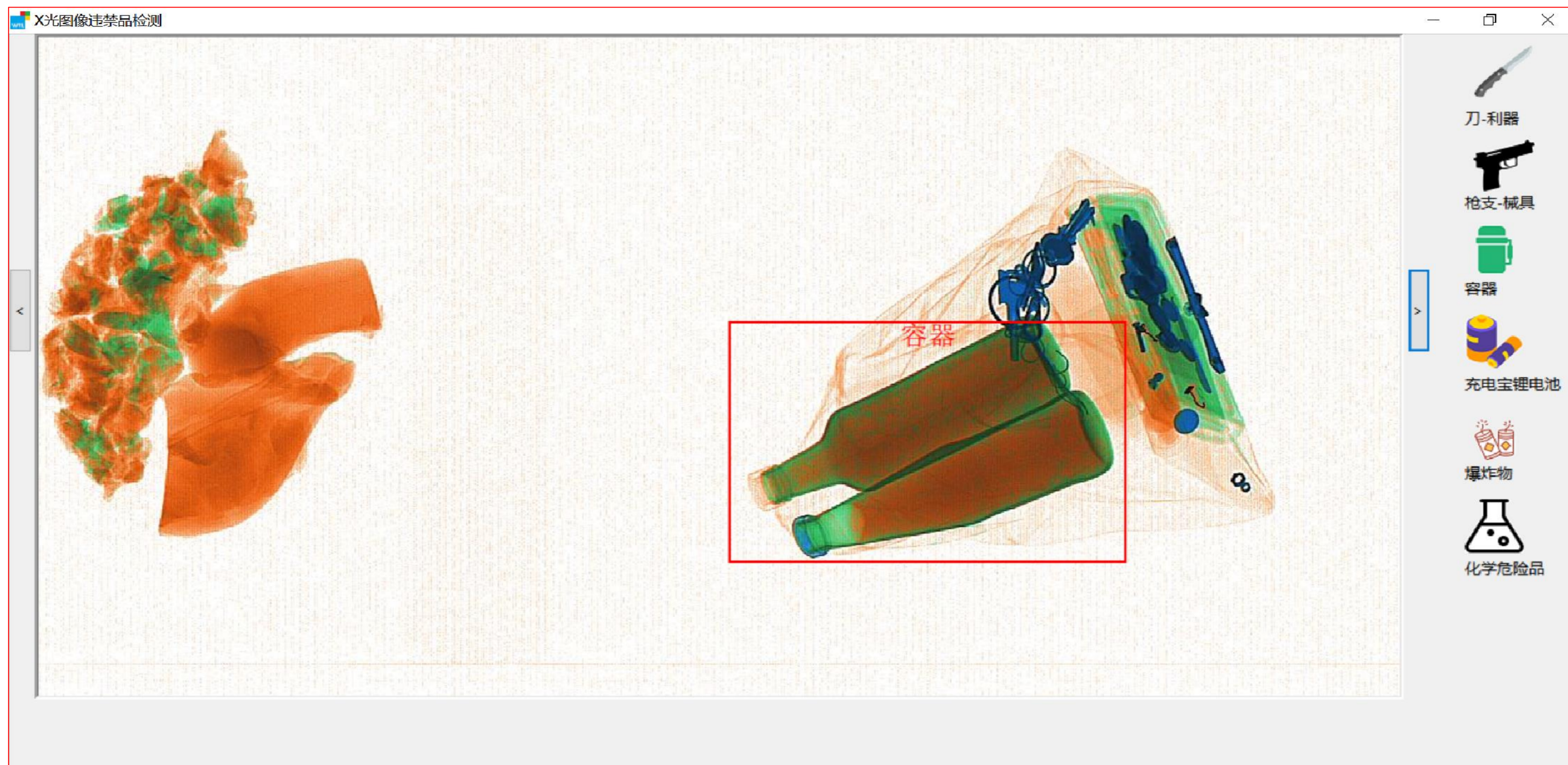


work process

The security inspection machine accesses the analyzer through the video encoder, and the analyzer analyzes the security inspection machine image, and displays the analysis result on the accessed screen and captures the image in the analyzer hard disk.

 AI algorithm box network diagram





Application UI

Identifiable Contraband species

class	knife	gun	bottle	chemicals	battery	explosive
detection rate	85%	83%	85%	88%	87%	86%
accuracy	89%	90%	88%	91%	87%	80%
remarks	Dagger, triangular knife, spring knife, single blade, double edge, triangular edge knife, bayonet, folding knife, jumping knife, fruit knife, scissors, kitchen knife, paper cutter Blunt, wrench, file, pliers, axe,etc	Pistol, rifle, submachine gun, machine gun, riot gun, sample gun, prop gun, starting gun, simulation gun, cymbal, shotgun Tear gas, electric shock, handcuffs, batons, police whip,etc	Thermos cup, bottled liquid	Toxic products, corrosives, electrolytes, acidic substances, strong oxidants, solid alcohol, , fire gas, solid alcohol, alcohol, descaling lubricants, killing Insecticide, etc	Lithium battery, charging treasure	Explosives, firecrackers, bullets, fireworks, ammunition, matches, strong magnetic items, etc

Thank You!

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