• Princess Chulabhorn Science High School Phitsanulok

Development of AI-based Concealed Guns Detection and Notification System

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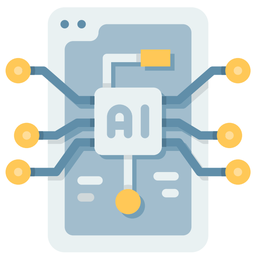
• PROBLEM

There are many of crime situations in present and they might be increased.

These situations can damage to our life and property.



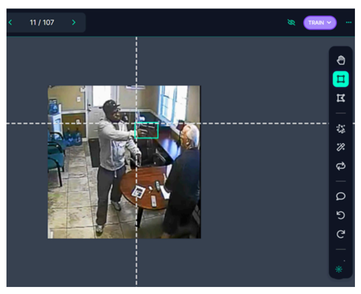
Use AI to detecting one of the cause of crimes, "Guns"

AI-based Concealed Guns Detection and Notification System

• FRAMEWORK

1. Find knowledge that relate with the project.

2.Collecting guns pictures.



3.Labeling the guns.

4.Use VS code for coding the project.

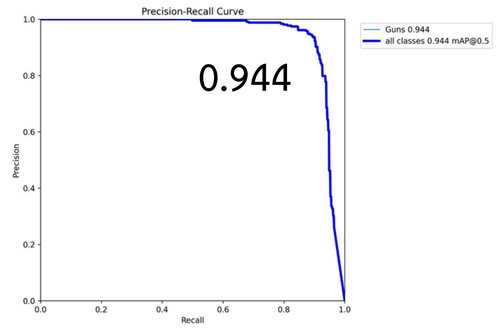
5.Editing website for users.

6. Make Line notification system.

7.Testing the accuracy.

• FINDS

Guns detection with medium to high accuracy, around 70-90 percentage.



Ai-object detection accuracy with mattrix table and PR-curve.

Testing with real footage of crime situation.

• CONCLUSION

The developed system achieved an accuracy of 94 percent, accurately detecting guns in various conditions. In places with low light value, the system achieved 75 percent accuracy; in places with normal light value, it achieved 80 percent accuracy; and from closed-circuit camera video, it achieved 64 percent accuracy. The system was able to send images and related information through Line notification to users promptly.

• REFERENCE

[1] Shenghao Xu. 2020. Development of an AI-based System for Automatic Detection and Recognition of Weapons in Surveillance Videos. School of Science and Technology The Open University of Hong Kong, Hong Kong, China
[2] Dr. Thanapong Inthra et al. 2022. AI detects people concealing firearms from CCTV cameras. Faculty of Science Khon Kaen University.
[3] Penpitcha Pattanachitsilp. 2021. Obstacle detection for electric wheelchairs using computer vision. Computer Science Major, Department of Computer Engineering Faculty of Engineering Chulalongkorn University.