Security Agent

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One of the most critical challenges for governments is law enforcement and city safety;from that came the importance of systems that can detect lawbreaking.This project's objective is to carry out a drone that can detect security issues and give an alert to the police. Using 3D deep artificial neural network, the fully autonomous drone can detect violence action,different types of guns either by image sound,Illegal immigration boats,car accidents,people in a dangerous situation... and once detected the drone will Video Capture the action and send it with the GPS data to police and the nearest hospital if needed. It also can detect Protests and feed the government with valuable data such as(Presence of children, fire, signs, law force presence, danger level…) and also the weakest point on the Crowd to know how to deal with the situation. It is not possible to train a 3D DANN using video(3D) for action detection and images(2D) for object detection on the same model. So,after several failed hypothesis I have developed an AR algorithm to turn 2D images to 3D, which It worked but with 68% accuracy. That’s why I added 4 custom layers to the 3D DANN and higher the dataset to 95000 images in order to obtain 96% accuracy on detecting lawbreaking related actions. With the evolution of deep learning,we can achieve even higher accuracy by increasing the dataset To ensure more safety, the drone is capable of detecting and Chasing high-speed cars and send the detected plate number to the police The methods presented in this project enable actions,objects and sounds detection on the same model. Future studies should include more input data and classes to experiment on how accurate and fast the model can be? This way we ensure more security and safety for the human population.

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