

IDENTIFYING ABNORMAL CUSTOMER BEHAVIOR FROM SURVEILLANCE CAMERA AND SECURITY ALERT BASED ON DEEPLARNING

SYNOPSIS

Identifying customer's interests is valuable as it intuitively represents the product the customer wants. It can also be an effective marketing strategy for determining potential customers. Therefore, large retail vendors like Walmart and Costco analyze customer purchase history to identify customer interest. However, purchase history alone cannot fully determine how much interest in the product a customer has other than what they have purchased. In other words, products that the customer does not purchase but are interested can never be identified. While safety and security should be a priority all year round, you should pay even closer attention to these matters during the days. When it comes to overall safety and security of your businesses or SME's (small and medium enterprises) video surveillance and security cameras are most important. Living in this century it is very crucial to follow the trends of modern technology in terms of our security and safety. This project focuses on identifying a customer's interest based on behaviors from surveillance cameras. We detect the customer's gaze direction as this behavior accurately reflects customer interest in a particular product. CCTV is rarely used to PREVENT theft - that would usually require someone watching the video feeds constantly, which is impractical for the rare times it actually happens. Recorded video is more often used to aid in investigation and prosecution. Sometimes the deterrent factor can prevent theft - cameras are made obvious, and many stores will have "customer awareness" monitors at entrances, showing people that they're on camera. If potential thieves are made VERY aware that they're being recorded, they'll sometimes move on to somewhere else. In this project mainly focuses on identifying a customer's interest based on behaviors from surveillance cameras. We detect the customer's gaze direction as this behavior accurately reflects customer interest in a particular product and the security of the shop at night. If an incident occurs at night in a shop, someone trespasses from outside (Thief), incase product may fall, cross the animals if any changes occur (Abnormality was discovered due to any object), It is advisable to notify the appropriate security. A shop will have cctv running full time. In this case the video will be stored only if something happens at night. Background Subtraction Algorithm is used to find what goes on inside the shop at night (Abnormality). Machine learning is used to find out what is the cause of the abnormality.