香 港 大 學
THE UNIVERSITY OF HONG KONG

HKU SPORT AI LABORATORY

人工智能
異常狀況偵測技術

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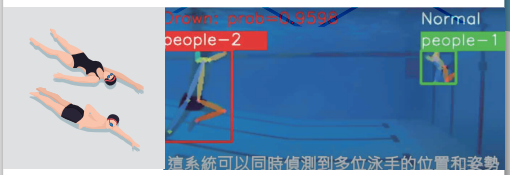
人工智能異常狀況偵測技術，由香港大學電機電子工程系的運動人工智能實驗室研發，運用了人工智能和深度學習分析影像中的不尋常情況，可以有廣泛的應用。場景應用包括溺水警報，大型活動的安全保障，院舍學童安全保障及行人動作姿勢分析

溺水警報



當有泳者在游泳池裏溺水，系統可以即時在出事地點附近的警報燈發出警報，救生員可以馬上去救援。此系統曾經榮獲2021年香港資訊及通訊科技獎。

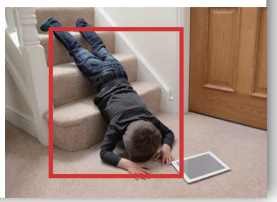
大型活動的安全保障

AI異常狀況偵測技術也應用在大型活動的安全，當參與活動中有異常情況時，系統可以自動檢測和追蹤異常點，讓保安人員可以作出及時應變，保障與會者的安全。

人工智能異常狀況偵測技術

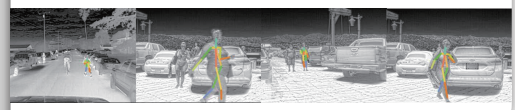
院舍學童安全保障

很多地方例如學校院舍都已經安裝了閉路電視保安系統，並有二十四小時錄影設備，這系統亦可以擔當作一個機械巡查員，智能地監察每一個鏡頭的每分每秒，當有異常情況發生時就會記錄下來，向主管報告，以確保學生和院舍院友的安全，一些院舍例如為輕度智障學童提供住宿服務的匡智之家正在試用這人工智能技術以提升院舍的服務質素。



行人動作姿勢分析

此外我們亦獲運輸署的智慧交通基金支持，研究利用人工智能和深度學習技術，利用熱能圖像分析行人的姿勢、動作、速度和異常情況，以提升道路安全。研究亦會探究利用行人動作姿勢，判斷是否長者和殘疾人士，以延長行人閃動「綠色人像燈」時間，方便相關人士橫過馬路及提升道路安全。



人工智能異常狀況偵測技術應用廣泛，不但可以為機構提高安全和服務質素，也可以更善用人手，如對產品有興趣或有意加入我們的團隊歡迎聯絡我們。

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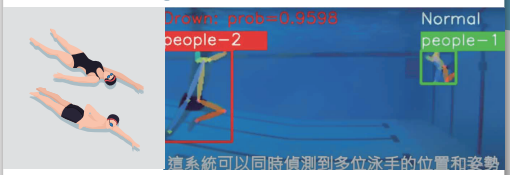
Artificial Intelligence Abnormal Detection Technology

Dr. Wilton Fok, Director of HKU Sport AI Lab, Department of Electrical and Electronic Engineering

This technology uses AI and deep learning to analyze abnormal situations in video which allows awide range of applications, such as drowning detection, mass event security assurance and children's safety, pedestrian and road safety.

Drowning Detection



When a swimmer drowns in the swimming pool, the system can instantly trigger the alarm lights near the accident location. Lifeguards can rescue the drowning swimmer immediately.This system has won the 2021 Hong Kong ICT Award.

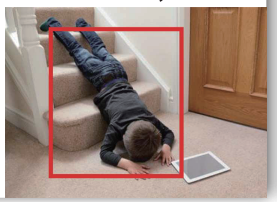
Mass Event Security Assurance

AI abnormal detection technology can also be used for the security assurance of mass events. When abnormal situations happen in theevent, the system can automatically detect and track the abnormal locations so that the security guard can make timely responses to ensure the safety of the participants.

Abnormal Detection

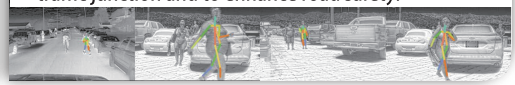
Children's Safety

To enhance the safety of children in schools and child centre equipped with 24-hour CCTV security system, this system can also act as a robotic in spector to continuously monitor every camera. When any abnormal situation occurs, the system can detect it and report it to the supervisor. Some organizations, like Hong Chi Children Home are piloting this AI technology to improve the safety and quality of service.



Pedestrian Action Posture Road Safety Analysis

Supported by the Smart Transportation Fund of the Transport Department, the use of thermal and visual camera images to analyse pedestrian posture, movement, speed and abnormal situations through using AI and deep learning technology for enhancing road safety is being studied. The research would explore the use of pedestrian movement posture to identify the elderly and disabled for extending the flashing green time to facilitate them to cross the traffic junction and to enhance road safety.



The AI abnormality detection technology is widely used, which not only can improve the safety and service quality of the organization, but also better utilize the manpower.
Please feel free to contact us if you are interested in our products or join our team!

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