

# Robo lifeguard

## Compositions

- 8 sets of under water IP camera to cover a swimming pool of 12m x 25m
- PoE IP Network switch
- AI Central server with 8 GPUs/Embedded systems
- Audio and Visual Alarm controller
- Audio speaker/ ring alarm
- Lighting alarm
- Mix monitor at safeguard station
- Portal control panel (Optional)

## Functions

- Generate warning signal when a human-like body is detected stationary for a period under a threshold level in the water
- Warning visual lighting and alarm
- User definable torrent period
- Centralized installation – the IP camera signals pass to a centralized service for processing.
- Optional portal tablet PC for monitoring the pool condition
- Optional monitoring display at the Safeguard station



▲ The Centralised AI Drowning Detection System can detect the human posture under water. When a human like object is detected to be stationary for a torrent period, an audio and visual alarm could be triggered.

▲ Lifeguards could monitor the situation under the water through the fixed monitor at the station or through the portal control panel through WiFi.

## AI Drowning Detection System

Swimming is a hotspot in many places. Our Smart Swim solution can address a great demand by the swimmers' community: Safety. There are many accidents happening in the swimming pools. According to the Leisure and Cultural Service Department (LCSD), there are 328 accidents and 2 drowning deaths in 2018. Our Smart Swim – drowning detection system is being demanded by the market.

Although there are a few solutions for drowning detection exist in the market. However, the solution was developed based on an outdated software, databases and data analysis model. The system can only be used for drown detection as a safety facility only. Moreover the cost is very expensive. It costs around HK\$1 million to 2 million for a standard swimming pool installation. We target to develop a more powerful and faster solution at a lower cost so as to make this solution more affordable and could be commonly implemented in the school community.

This solution was one of the deliverables from the ITF Better Living Fund project and the prototype was successfully installed in Munsang College in Sept 2020. It is now getting into the commercialization stage and targets to be deployed in more schools and promoted to the LCSD public pool in the coming year.

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AI Drowning  
Detection System