

## OBJECTIVES

Lifeguard surveillance is a complex task crucial for swimmer safety; few studies have enquired into this domain. Lifeguards were more accurate and responded faster between drowning targets; drownings respond more than active drownings. Highlighting that passive drownings may be less salient but are instructive once detected. Set size effects revealed reaction speeds at an intermediate size level; array increases size. The ability to discriminate between lifeguard and non-lifeguards for training and assessing lifeguard surveillance skills. Safety in swimming pools is a crucial issue. The presented software can detect a drowning person in indoor swimming pools and sends an alarm to the lifeguard if the detected person is missing for a specific amount of time. The presented algorithm for this system is testing the several video sequences recorded in swimming pools in real conditions and the results of high accuracy with a high capability of tracking individuals in real time. According to evaluation results, the number of false alarms generated by the system is minimal and the maximum alarm delay reported by the system is 2.6 sec, which is reliable compared to the acceptable time for rescue and resubstitution. Every year, many individuals, including kids under the age of 5, drown in the depths of the swimming pool, and the lifeguards are not well trained enough to handle these situations. Thus arises the requirement for having a system that will consequently detect the drowning individuals and alarm the lifeguard at such risk. Swimming pool surveillance systems play an essential role in safeguarding the premises. The project approach is to detect a drowning incident in swimming pools in early stages. The children's life is saved during drowning incidents in swimming pools by lifting acrylic plates. The proposed approach consists of an RF module, Pressure Sensor, and Motor Driver. The demo system on pressure sensor has an advantage of cost saving and simple algorithm. The current research adds by examining lifeguard drowning detection across two dynamic search tasks. Behavioral responses and eye movement data records watched video clips and attempted to identify a swimmer. The results demonstrate lifeguard superiority in response times to drowning events, compared to non-lifeguards.