LITERATURE SURVEY

[1] Lei Fei, Wang Xueli, Chen Dongsheng, proposed a background subtraction method for drowning detection and swimmer identification using visual surveillance in their research paper. This method fails to reflect real background accurately thus restricting model accurate shape detection of moving objects. It also fails to reflect sudden background changes.

[2] Ajil Roy, Dr. K. Srinivasan, proposed drowning detection using RFID-based swimming goggles, however, this model also fails to overcome the limitation of accuracy since the water sensor is not placed very close to the mouth and nose. But this model successfully overcomes limitations of video surveillance-based drowning detection systems like the need for high power computing devices.

[3] Xu et al. has carried out a study to underwater classification of images using deep convolutional neural networks to improve the classification ability using augmentation methods such as aspect ratio augmentation and color augmentation.

[4] M. A. Hayat proposes a technique to detect a drowning person in the swimming pool using video image frames. A-frame by frame difference VIBE algorithm is used to detect drowning persons is demonstrated used to determine the swimmer's position.

[5] Jose, A. and Udupa, G. 2021. Gantry robot system for preventing drowning accidents in swimming pools

[6]   Laxman, P. and Jain, A. 2019. A review paper on design and performance evaluation of drowning death prevention system with various technologies