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**LITERATURE REVIEW :**

This section focuses on the identification and discussion about similarities between already proposed or existing drowning detection methods. First let's talk about the vision-based approach to early detection of drowning incidents in swimming pools proposed by Wenmiao Lu and Yap-Peng Tan. This contains two parts: a vision component and an event inference module. In this method the drowning is detected quickly using a sequential change detection algorithm. The second proposed method is drowning detection method that ensures safety for swimmers proposed by Dr.K.Srinivasan and Ajil Roy where the scholars proposed RFID based goggles for swimmers. But the limitations can be from the water sensor itself as it gives less accuracy and is found to be away from mouth and nose.

**RESULTS AND DISCUSSION :**

So generally all publications that proposed have agreed that the drowning person is neither able to call out for help nor wave their hands. To evaluate the performance of the system, different footages are used. We can also use both true and false alarms. Also the false alarm can be considered as the detection was a mistake. After the project completion one can detect the drowning using the surveillance, an alarm will be raised when a person is drowning.

**CONCLUSION :**

Life safety in water can be a great concern for years, the death caused due to active drowning is alarmingly increasing day by day. Survey report also mentions the amount of death rate higher among childrens than adults. The above system we proposed may help in preventing these accidents. Constant video surveillance may help in reducing active drowning deaths.

**FUTURE SCOPE :**

A better system with modern technology, modern algorithms and artificial intelligence will play a major role in future detection systems. This also can be proposed to environments with extreme conditions and can give a better accuracy than previously proposed systems.

**REFERENCES :**

1. Lei Fei, Wang Xueli and Chen Dongsheng, “Drowning Detection Based on Background Subtraction”, Proceedings of the National Power Systems Conference (NPSC) - 2018, December 14-16, NIT Tiruchirappalli, India International Conferences on Embedded Software and System, 2009, pp. 341-343
2. Wenmiao Lu, Yap-Peng Tan, “A vision based approach to early detection of drowning incident in swimming pool” published in IEEE Transactions on circuits and Systems Technology - 2004, February
3. Ajil Roy, Dr.K.Srinivasan, ‘A novel drowning detection for Safety of swimmers”, Proceedings of the National Power Systems Conference (NPSC) - 2018, December 14-16, NIT Tiruchirappalli, India International Conferences on Embedded Software and System, 2009, pp. 341-343