**Application:**

Now-a-days automatic emotion recognition system has become popular in the field of study. Because the application of the automatic emotion detection can help to get e better performance and service from some system. New models are suggested for computer recognition of human emotion and both theoretical and practical applications are described for learning human computer interaction perceptual information retrieval creative arts and entertainment human health and machine intelligence. [2]

For example, let’s imagine a situation where a teacher is giving lecture in a class room full of students. If the teacher can see the emotional status of the students in real time, he can modify his lecture in a good way. May be when the students are getting bored, he can tell a joke or an interesting story to make them attentive. Again when the students are interested or attentive with the lecture, the teacher can continue with that or can even increase the flow. So this real time emotion recognition could be used as a guidance system for the teachers who wants to make the students satisfied with his lectures.

One of the interests in the Media Lab is the building of better piano teaching computer systems in particular systems that can grade some aspects of a student’s expressive timing dynamics phrasing etc. [8]

Another interesting application can be the detection of kids’ emotion. Kids sometime couldn’t express their feelings and thus parents have a difficult time to take action. However if the parents have a system which can recognize the emotional status of the child, he can take proper actions to make his child happy again.

Many scientists have given effort to make an effective lie detector but could invent such method or system. Lie detection took on aspects of modern science with the development in the twentieth century of techniques intended for the psycho physiological detection of deception, most prominently, polygraph testing. [5] But emotion recognition system can be used as a lie detector [5] at the time of investigation or in other similar situations. British airport authorities are testing one system based on the Facial Action Coding System (FACS) [6]

Building better and richer interactions between computing applications and users is an ongoing challenge of researchers, product designers, and solution providers alike. One promising avenue is for instance from the field of affective computing [2] to build enhanced user models to include application context and emotional response.

Again this real time emotion recognition system is highly being used in human-computer interaction (HCI) [7] Recent neurological studies indicate that the role of emotion in human cognition is essential emotions are not a luxury Instead emotions play a critical role in rational decision making in perception in human interaction and in human intelligence. [2]

In the last decade there has been a rapid growth in commercial applications of eye-tracking technology in the United States, Europe, Asia, and Australia to assess the effectiveness of visual marketing efforts. Firms such as Kraft Foods, Microsoft, Google, Yahoo, IBM, Pepsico, Pfizer, P&G, and Unilever are leading users of the methodology in product and communication development. [9] Now what if the observer system were also able to recognize the customers emotions besides tracking their eye ball, then the system could build up a prediction system for that particular customer based on their emotional status.