

## **CHAPTER 7**

### **CONCLUSION**

*The gist of the work carried out in the thesis is given in this chapter, followed by the technical impediments and the possibilities for extension of the current work.*

#### **7.1 RESEARCH FINDINGS**

In this research work we have suggested and developed an approach to enable a computer to analyze events and detect the emotion associated with the event, if any. The system was implemented as a neuro-fuzzy system. The emotional values were computed through JAVA programs and fed to the simulated Neuro-Fuzzy System in MATLAB. The output is generated based on the membership functions and inference rules constructed. Training of the Neuro-Fuzzy System is also provided using the backpropagation algorithm. The system has produced satisfactory results in correlation with the emotions and intensity levels identified by human annotators. As proved through earlier work, NFS can be used effectively to model human behavior and this research supports the argument.

The major thrust in AI is to develop computer function normally associated with human intelligence. Emotion is fundamental to human experience, influencing cognition, perception, and everyday tasks such as learning, communication, and even rational decision-making. If a

computer system has elements of the rational mind and also the emotional mind then it will eventually take the processing power of computers to new heights. By building general models of emotion we may gain insight into building models of intelligent behavior in general, in the future. This research work is an effort towards this goal.

## **7.2 LIMITATIONS**

- The system is not able to recognize emotion from sentences which have no emotional keywords. The implicit expression of emotion cannot be detected.
- The semantic and syntactic relationships between the words of the sentence are not considered for emotion recognition.
- Contextual meaning of the emotional keyword which could possibly increase or decrease the affect factor is not taken into account.
- Semantic similarity between the emotional keywords and a standard corpus, as done in most of the related research is not determined here.

## **7.3 SCOPE FOR FURTHER RESEARCH**

- The emotion model can include more adjective groups as emotion modifiers for a better recognition of the intensity of emotions .

- The system can be extended to recognize complex emotions like pride, hatred etc. Semantic labeling techniques can be used to take into account more semantic labels.
- The model can be applied to other languages depending on the availability of the corpus.
- Stemming techniques can be incorporated to determine the emotional state for all the possible forms of a given emotional word which enhances the efficiency of the system.