

CHAPTER 1

A relation is something which requires understanding the feeling of others

PREAMBLE

This project is given the name “TO BUILD A MODEL FOR IMPLEMENTING AUTOMATED LIP READING TECHNIQUE WHICH INVOLVES LIP MOTION FEATURE TO TEXT CONVERSION”.

A speech recognition system has three major components: feature extraction, probabilistic modelling of features and classification. In literature, the general approach is to extract the principle components of the lip movement in terms of the lip shape based properties in order to establish a one-to-one correspondence between phonemes of speech and visemes of lip shape. Several modelling and classification aspects for speech reading are studied and compared to come up with a compact and faster algorithm to implement proposed problem statement.

This project aims at robustly tracking the lip region based on color and shape information. With this assumption that the lip localization part can be achieved, this project begins with the videos being shot focused basically to the lip area. The lip shape or contour is uniquely described using the lip feature vector which eventually forms part of the lip feature vector accounting to a single syllable. The experimental results have been tested on different frames under constraints of illumination condition and head motion.

1.1 INTRODUCTION

The process of understanding human behaviour is been interesting problem since the generation. The invention of computers and further, imaging algorithms opened up new avenues to automate the concept of understanding the human behaviour. The role computing knowledge in behaviour management has brought a paradigm shift to not only automate the engineering theoretical areas but, also provided insight for Medical area of research.