**Recognizing and Expressing Affect**

**Project Proposal**

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1. **Problem Definition**

In our daily life, affective competence with normal rational thinking and logical reasoning ability is playing an important role. At present the computer is still based on logical reasoning ability, if humans are able to bring the computer emotional ability, like bringing the computer a higher, comprehensive intelligence, establishing a harmonious environment for human-computer interaction, and giving the computer ability to adapt to human emotions, then to some extent, it will provide a lot of convenience to life. Shaping the artificial character and combining it with facial expression recognition, expression synthesis and artificial intelligence techniques can construct a virtual human proto-system which can continuously express emotions.

This project will focus on emotion modeling, emotion recognition and its related applications. Emotional models are created to make computers smarter, more friendly, and more capable. Therefore, we use a variety of methods to establish emotional models, which is for bring humans and computer better interaction. In addition, collecting some relevant information like reading papers, journals and magazines, can make us understand the current development of the technology and future applications.

1. **Objectives**

This project will emphasize recognizing and expressing affect and there are some major objectives:

* Understand the impact of emotion on behavior.
* Design emotional space and emotion calculation.
* Establish models of facial expression change.
* Understand different emotional models, like facial expressions, speech emotions and physiological signals.
* Understand the status of the technology development and application prospects.