Report

Period: Nov. 21 - Nov 27, 2014

Task: **Simulating and estimating multimodal emotion recognition using different multimodal emotion databases**

Subtasks: **SVM training and classification, Performing simple actions on NAO, Analyzing facial and vocal data**

1 Task 1

I have finished the paper of 'Vocal Based Emotion Recognition Using Multiclass Support Vector Machine' in which proposes a new method for multiclass classification of vocal emotion recognition system using multiclass SVM with nine different feature pairs, namely pitch and intensity, pitch and first bandwidth, pitch and second formant, pitch and third formant, pitch and fourth formant, pitch and noise-to-harmonics ratio, pitch and standard deviation, intensity and second formant, intensity and mean autocorrelation. In this research multiclass SVM is trained by using each of above mentioned feature pairs and the final vocal emotion recognition was done by applying majority voting algorithm to all decision received from different feature pairs.

Also, I have written the Multiclass SVM matlab code which is making the one sample out cross validation tables for the each of the above mentioned feature pairs.

Tasks for the Next Week

1. **I am planning to estimate the vocal emotion recognition performance by using feature vector fusion (FVF) technique, and AdaBoost algorithm is used for majority voting to combine all the decisions for each of the feature pairs.**
2. **Analyse facial emotion recognition techniques and algorithms**