Continuous Emotion Recognition: Another Look at the Regression Problem

Regression is an optimization problem that is used to set model parameters so that the resulting model minimizes the prediction error. If the criterion for the goodness of a regression model is other than the prediction error we might need to modify the cost function of the optimization. A commonly used measure for assessing the goodness of a prediction is the correlation coefficient of prediction values with the actual value of a response value.

Perfect prediction = maximum correlation coefficient.

Lower prediction error does not guarantee a higher correlation coefficient.