

## Abstract

Nowdays, development of internet technology is growing rapidly making its user increase over time. Its utilization is also very diverse which one of them is online transaction. In an online transaction, the buyer or reader are able to free to gives a review which resulted in the number of existing reviews to be very much. This can lead to a potential buyer may have difficulty in reading the reviews. In fact, those reviews are very affects them in making a decision to buy a product. In this final project, for ease in reading these reviews, it will be performed a feature and opinion extraction using Conditional Random Fields (CRF). There are three important step in the extraction with CRF, which is the feature functions extraction, training, and decoding. In the feature function extraction, the features in training data associated with the corresponding labels. Training phase aims to find the optimal values of support parameter , and after that we performed the decoding phase to label the new dataset. Three scenarios were then tested on the system to see the performance of feature and opinions extraction such as the influence characteristic data, the effect of the Gaussian prior parameters and learning rate, and the effect of the use of feature function words, POS, and lexical. The test results showed that the average accuracy of the system is around 76%

**Keywords** : CRF, decoding, extraction, feature function, Gaussian prior, learning rate, training