

# Discriminative Naive Bayes for Text Classification

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**Abstract.** Due to the rapidly increasing text information on the Internet, there is a growing need for the text mining system, which helps people find, filter and manage those enormous text information. As the core component of a text mining system, text classification algorithm plays a crucial role. Naive Bayes is one of the most widely used text classification algorithm because of its efficiency and the nature for incremental learning. However, the prediction performance of naive Bayes is often inferior to other top performing text classifiers, such as SVM, and thus limits its usage. In this poster, we propose a discriminative naive Bayes classification algorithm for text mining, which improves the prediction performance of naive Bayes by relaxing its independence assumption. Empirical study shows that our discriminative naive Bayes has the same prediction performance with SVM, and still keeps the advantages of naive Bayes'.