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**Nomenclature**

|  |  |
| --- | --- |
| B | Bias for hyper-plane in SVM |
| C | Regularization parameter for SVM |
|  | Category to which documents belong (C1 or C0) |
| Di | ith Document |
|  | Decision function |
| FP | False positive |
| FN | False negative |
| F1 | Evaluation parameter combining precision and recall |
| IDFt | Inverse Document Frequency for the term t |
| K | Number of nearest neighbours(training documents) with which distance computation is to be performed |
| L | Words present in the document |
|  | Multinomial model feature vector for the ith document in training |
|  | Frequency of word Wt  in document Di |
|  | Multinomial model feature vector for the jth document in testing |
|  | Total number of words in Di |
|  | Number of documents |
|  | Number of documents of class Ck |
| NFt | Number of documents containing term t |
| TP | True positive |
| TN | True Negative |
| TFi | Frequency of ith word in a document |
|  | Dictionary |
| W | Word |
|  | Weight vector for defining hyper-plane is SVM |
| X | Input feature vector |
| Y | Output class of a classifier |
|  | Parameter to indicate Di has class Ck |
|  | Lagrange multipliers |
|  | Lagrange multipliers used for soft margin SVM |
|  | Distance parameter |
|  | Slack variable of ith training document violating margin |
|  |  |
|  |  |