

# SVM<sup>map</sup> on LETOR

[Introduction](#)

[Learning parameters](#)

[Papers&Docs](#)

[Notes](#)

## Introduction to SVM<sup>map</sup>

SVM<sup>map</sup> is a structural Support Vector Machine method which optimizes for an upper bound of average precision loss in the predicted rankings.

The details of SVM<sup>map</sup> can be found at <http://projects.yisongyue.com/svmmap/>

The details of structural SVMs can be found at [http://www.cs.cornell.edu/People/tj/svm\\_light/svm\\_struct.html](http://www.cs.cornell.edu/People/tj/svm_light/svm_struct.html)

## Learning Parameters

We used the package available at <http://projects.yisongyue.com/svmmap/>. The C parameter was set using the validation set.

Dataset	-c (from Fold1 to Fold5)
OHSUMED	0.00001, 0.8, 2, 2, 10
TD2003	100000, 1000, 0.1, 0.1, 1000000
TD2004	100000, 100, 1000000, 10000, 100000
HP2003	10000, 0.05, 0.01, 0.04, 0.03
HP2004	4000, 1000, 50000, 2000, 9.5
NP2003	0.09, 10000, 30000, 40000, 100000
NP2004	0.08, 60, 100000, 4.5, 70

## Papers & Docs

Y. Yue, T. Finley, F. Radlinski and T. Joachims. A Support Vector Method for Optimizing Average Precision, Proceedings of the ACM Conference on Research and Development in Information Retrieval (SIGIR), 2007

I. Tsochantaridis, T. Joachims, T. Hofmann, and Y. Altun, Large Margin Methods for Structured and Interdependent Output Variables, Journal of Machine Learning Research (JMLR), 6(Sep):1453-1484, 2005.

BIBTEX

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@InProceedings{Yue/etal/07a,
  author = {Yisong Yue and T. Finley and F. Radlinski and T. Joachims},
  title = {A Support Vector Method for Optimizing Average Precision},
  booktitle = {ACM Conference on Research and Development in Information Retrieval (SIGIR)},
  pages = {271--278},
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@Article{Tsochantaridis/etal/05a,
  author = {I. Tsochantaridis and T. Joachims and T. Hofmann and Y. Altun},
  title = {Large Margin Methods for Structured and Interdependent Output Variables},
  journal = {Journal of Machine Learning Research (JMLR)},
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## Notes

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