

Personalisation of Web Search Results

Project Aims

When a query is submitted to a search engine (such as Google or Yahoo!) the “best” results will be different for different people, yet generally all users who submit the same query are shown the same set of search results. I am investigating methods of providing search results that are tailored to the interests and preferences of the individual.

The need for personalisation

Before building technology to solve a problem, it is good practice to first establish that there really is a problem to solve! Two user studies have been carried out investigating user satisfaction with current search engine results. Some of the main findings from these were that:

- Users show only a small preference for search engine’s result orderings over randomised lists of the same results
- It is possible to group users according to their search preferences, and to leverage this for personalisation
- Presentation bias is a huge factor in determining clicks (users often click the top result regardless of its quality)

Hey PResTo!

Personalised results depend crucially on the data collected and stored in the user profile, and on the algorithm used to match the profile data to relevant search results. I am developing a Personalised Results Tool called PResTo! which builds a profile of the user’s interests incrementally by observing their search and browsing behaviour. PResTo! uses the stored data to re-rank search results generated by third-party search services on the web.

User privacy is assured because none of the profile data is ever shared with the websites involved; PResTo! runs on the user’s own machine and stores the user profile locally.



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Project Details

PhD research

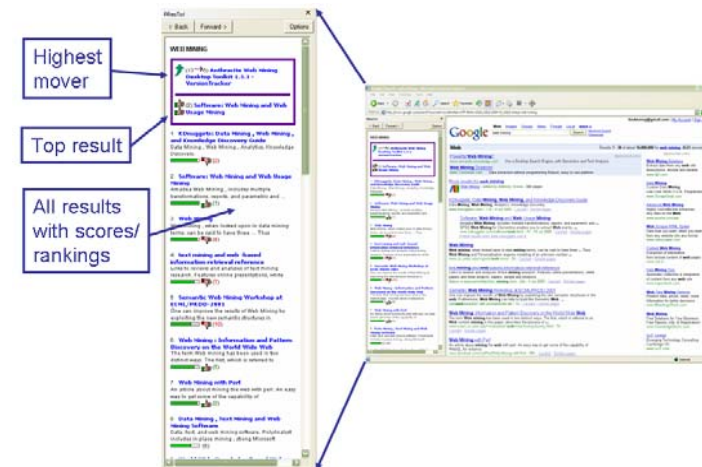
Keywords

Web search

Personalisation

User profiling

Recommender systems



The PResTo! Personalised Results Tool is a plugin to Internet Explorer which re-ranks the search results from various search providers and displays them in a sidebar

How good is personal?

Another key research question is how the quality of personalisation can best be measured. The problem here is that personalised rankings of results – by definition – are different for each user, so standard measurements of the quality of search results (such as precision and recall) can not easily be applied to personalised results. New evaluation criteria and metrics are needed for the assessment of the effectiveness of personalised systems.

Key publication

K. Keenoy and M. Levene, **Personalisation of Web Search** in S. Anand and B. Mobasher (eds.) *Intelligent Techniques for Web Personalisation*, Springer LNCS 3169, 2005.