

NewScientistTech

[Home](#) | [News](#) | [Forums](#) | [Special Reports](#) | [Subscribe](#) | [Search](#) | [RSS](#)

Wikipedia links used to build smart reading lists

09:30 02 January 2007

[NewScientist.com news service](#)

Will Knight

Software that generates a list of reading material tailored to a person's individual interests has been developed by a PhD student in the US.

Alexander Wissner-Gross, a physics student at Harvard University, teaches a course to under-graduates student at his university. While preparing the reading list for his course, he began to wonder about ways to automate the process.

Wissner-Gross says he saw similarities between the structure of his course and the way information is connected via links in Wikipedia, a free online encyclopaedia written and edited by volunteers.

"Increasingly, a net user who wants to learn more about a subject will

read its Wikipedia page," he adds. "However, for further depth in the subject, there has been no system for advising the user which other [Wikipedia] articles to read, and in which order."

So Wissner-Gross experimented with algorithms that analyse the hypertext link structure of the site. He used these to find the "most important" Wikipedia pages on a particular topic. He also used them to find pages within a particular area, like physics, that also had information about another topic of interest, such as helicopters, say.

Ranking pages

An algorithm similar to that used by Google was particularly effective, he found. It assesses page popularity by examining the number of other pages that link to it and also the popularity of those pages. Another algorithm, that examines the number of links needed to get from one article to another, also produced good results with shorter lists.

"If I have a medical student who's particularly interested in neuroscience, I could custom-generate a list of reading suited to them," he says.

Wissner-Gross also believes the software could help researchers who want to quickly brush up on a particular topic quickly, by selecting reading material that is best suited to their existing expertise.

He has also developed a portable version, which uses a copy of Wikipedia downloaded to an iPod, and is testing the software on himself: "It's certainly exposing me to the new experimental techniques that I wouldn't have come across otherwise."

Enormous content

Jon Kleinberg, an expert on information networks at Cornell University in New York, US, says the project has potential.

"Analysing the structure of Wikipedia is definitely a promising general way to help users keep up with its enormous information content," he told **New Scientist**. He says the relatively unstructured nature of Wikipedia resembles the early web: "Given this, it's natural to adapt analysis techniques that have worked well for web content."

Advertisement

Ads by Google

[Picture Frames Online](#)

Online Store offers a large range of picture frames to order online.

www.toucanart.com

[License Plate Frame](#)

Personalized license plate frames for car, truck, rv or cycle. \$12.95

engravenet.com

But Kleinberg adds that there are several other ways that could potentially be used to organise content found in Wikipedia. He suggests perhaps exploiting the identity of individual Wikipedia editors, for example.

"One can try to exploit a different analogy, viewing Wikipedia as a system where many editors express interest in topics by editing pages," he says. "In this way, one can try making 'Amazon-style' recommendations, like 'people who edited this page also edited this'."

Related Articles

Software could add meaning to 'wiki' links

<http://www.newscientisttechnology.com/article/dn9295>

07 June 2006

Self-censoring 'Chinese Wikipedia' launched

<http://www.newscientisttechnology.com/article/dn9145>

11 May 2006

Word 'bursts' may reveal online trends

<http://www.newscientisttechnology.com/article/dn3405>

18 February 2003

Weblinks

Alexander Wissner-Gross

<http://www.alexwg.org/>

Harvard Engineering and Applied Sciences

<http://www.deas.harvard.edu/>

Jon Kleinberg, Cornell University

www.cs.cornell.edu/home/kleinber

[Close this window](#)