The bX Scholarly Recommender Service

Nettie Lagace
Product Manager, Ex Libris

NISO Discovery to Delivery:
Creating a First-Class User Experience
Atlanta, March 23, 2010
Agenda

- What will the future be like?
- Recommender systems in general
- New scholarly environments
- Article recommenders
- Interfaces
- Contributions
Stay Ahead of the Shift:
What Product-Centric Publishers Can Do to Flourish in a Community-Centric Web World

BEA, 28 May 2009
Mike Shatzkin
Recommender systems form a specific type of information filtering (IF) technique that attempts to present information items (movies, music, books, news, images, web pages, etc.) that are likely of interest to the user.

Women's Petite Outerwear

Sort By: Recommended

Women's Polartec Insulator Jacket
Was $59.50 Now $24.99

Women's SnowPark 700 Down Jacket
Was $99.50 Now $39.99

Women's Morgan Down Jacket
Was $39.50 Now $39.99
Snake Print Square Toes

These square toe pumps are a chic new addition to our range of flats. The snake print is subtle but distinctly glamorous, and can be doubled up with one of our skinny snake print belts or metallic wallets for extra charm.

Please Note:
In order to improve the product (and make the embossing more visible) we have changed the placement of the embossed snake scales so that the small scale print is over the toes and the larger print is along the sides of the pumps.

All sizes are now US sizes.

You may also like...

- Favourite Draw Neck Cardi
  From $58.00
- Easy V-neck
  $78.09
- Embellished Flats
  $118.00
- Skinny Scarf
  $45.00
The Moment Social Media Became Serious Business

3:31 PM Tuesday January 19, 2010 | Comments (20)

This train has left the station. Social media is no longer to become an integral part of the way we...
Changes in Web Communication
Changes in Web Communication
Changes in Web Communication

Customer Reviews

690 Reviews

Average Customer Review

A conservative review of Senator Obama's latest book.

By Dr. Emil Stufflebus (aka Tom Bombadil) (Central Gulf Coast) - See all my reviews

This review is from: The Audacity of Hope: Thoughts on Reclaiming the American Dream (Hardcover)

I set out to read and review Senator Barack Obama's latest book, not because I agree with everything he has to say, but because in some ways, I had respected him because he seemed to be a thoughtful and eloquent American with a compelling
Changes in Web Communication
**Library Book Recommendations**

<table>
<thead>
<tr>
<th>BibTip</th>
<th>Add to My List</th>
<th>View My List</th>
<th>Save/E-Mail Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>You might also be interested in...</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A man for all seasons / by Robert Bolt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 1865 / Jay Winik</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crossing to safety / Wallace Stegner</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Down in New Orleans / Billy Sothorn - photographs by Nikki Page</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lucky Jim / Kingsley Amis - with an introduction by David Lodge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The first Jesuits / John W. O'Malley</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat that springeth green / J.F. Powers</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Record 1 of 1:**

<table>
<thead>
<tr>
<th>Choose record view:</th>
<th>Full View</th>
<th>Brief View</th>
<th>MARC Tags View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
<td>Stegner, Wallace Earle, 1909-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uniform Title</td>
<td>Short stories</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>Collected stories of Wallace Stegner.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Published</td>
<td>New York: Random House, 1996</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Descr.</td>
<td>xvi, 525 p. : 25 cm.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Locations</td>
<td>Availability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td>O'Neill Stacks PS3537 T316 A6 1990</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISBN</td>
<td>0394584090</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Format</td>
<td>&lt;Book&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SystemNumber</td>
<td>000585410</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Google Books:</td>
<td>More on this title via Google Book Search</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| |
Schwartz, Randall L.


Permament link to this title

LibraryThing Recommendations
- Programming Perl by Wall, Larry.
- Mastering regular expressions by Friedl, Jeffrey E. F.
- Advanced Perl programming by Srinivasan, Srinam.
- Programming the Perl 5.6.1 by Descartes, Alligator.
- Perl in a nutshell by Patwardhan, Nate.
- Mastering algorithms with Perl by Cray, Jon.

Safari Books Online

Contributors
- Phoenix, Tom.
- Foy, Brian D.

Description
- xvi, 329 p. : ill. ; 24 cm.

Edition
- 5th ed.

Notes
- Includes index

ISBN
- 9780596020106
- 0596520107

Subjects: Psychiatric nursing


Edition: Notes:

People who borrowed this item, also borrowed (show more or everything):
- The child with epilepsy (1986) by Dillarme, Rosemary
- Gerontological nursing (7th edition, 2010) by Elliptolosia, Charlotte
- Essentials of gerontological nursing (2008) by Wallace, Meredith, PhD, RN

Items with the same or similar subject headings (show more):
- Psychiatric nursing made incredibly easy! (2004) by Lippincott Williams & Wilkins.
- The nursing process in psychiatric nursing / (1986) by Stockwell, Felicity.

Tags: nursing

Virtual shelf browser:

Useful links:
Amazon UK: http://library.hud.ac.uk/parl/amazon.pl?0385222386
Changes in Scholarly Communication

- Greater focus on content users create and choices & preferences they make

- User contribution increasingly important
  - Contributed explicitly by individuals

- The Web is multi-directional
Changes in Scholarly Communication

• Greater focus on content users create and choices & preferences they make

• User contribution increasingly important
  • Contributed explicitly by individuals
  • Implicitly - usage data captured by the system (‘clickstreams’)

• The Web is multi-directional
There is a need

• Information overload calls for new tools that assist users in finding relevant information
• Useful in the context of:
  • learning
  • exploring new fields of interest
  • inter-disciplinary work
  • specific information needs that are outside one’s field of expertise
• Search is NOT the only way to find...
Scholarly Recommender Service

Need to:

- Focus on scholarly materials – particularly **articles** (core unit of use)
- Be based on structural analysis of usage and not just based on popularity
Projected Effect of Dietary Salt Reductions on Future Cardiovascular Disease.

Birlinda Domingo J, Chertow GM, Cocqen DS, Moran A, Lichtbolld JM, Pletcher MJ, Goldstein L.

Background: The U.S. diet is high in salt, with the majority coming from processed foods. Reducing dietary salt is a potentially important target for the improvement of public health.

Methods: We used the Coronary Heart Disease (CHD) Policy Model to quantify the benefits of potentially achievable, population-wide reductions in dietary salt of up to 3 g per day (1200 mg of sodium per day). We estimated the risks and costs of cardiovascular disease in subgroups defined by age, sex, and race, compared the effects of salt reduction with those of other interventions intended to reduce the risk of cardiovascular disease, and determined the cost-effectiveness of salt reduction as compared with the treatment of hypertension with medications.

Results: Reducing dietary salt by 3 g per day is projected to reduce the annual number of new cases of CHD by 60,000 to 120,000, stroke by 32,000 to 64,000, and myocardial infarction by 54,000 to 99,000 and to reduce the annual number of deaths from any cause by 44,000 to 88,000. All segments of the population would benefit, with blacks benefiting proportionately more. Women benefiting particularly from stroke reduction, older adults from reductions in CHD events, and younger adults from lower mortality rates. The cardiovascular benefits of reduced salt intake are on par with the benefits of population-wide reductions in tobacco use, physical inactivity, and cholesterol levels. A regulatory intervention designed to achieve a reduction in salt intake of 3 g per day would save 154,000 to 332,000 quality-adjusted life-years and $10 billion to $24 billion in health care costs annually. Such an intervention would be cost-saving even if a modest reduction of 1 g per day were achieved gradually between 2010 and 2019 and would be more cost-effective than using medications to lower blood pressure in all persons with hypertension.

Conclusions: Modest reductions in dietary salt could substantially reduce cardiovascular events and medical costs and should be a public health target.

PMID: 20260097 [PubMed - as supplied by publisher]
Singular Value Decomposition and Principal Component Analysis
3 Mar 2003
by Michael E. Koll, Andreas Schaffrin, Luis M. Feito
posted to Mathematics by imrenchen on 2010-01-01 19:49:36 along with 8 people

Balance between genetic search and local search in memetic algorithms for multi-objective permutation flowshop scheduling
by H. Ishibuchi, T. Tsunoda, T. Murata
posted to memetic by imrenchen on 2010-01-01 17:58:42

A Survey of Explanations in Recommender Systems
by Naveen Tintner, Judit Motschik
posted to recommendation by imrenchen on 2010-01-19 15:29:20 along with 4 people

Data Mining: Know It All
26 November 2008
by Guaniar Chartikart, Karl Cox, Eike Frank, et al.
posted to Data Mining book by imrenchen on 2010-01-16 12:03:18 along with 8 people

Beyond Algorithms: An HCI Perspective on Recommender Systems
by Deena Rothenberg, Kiran Sree, Rajcham Singh
posted to recommendation by imrenchen on 2010-01-15 08:23:50 along with 2 people

A Survey of Accuracy Evaluation Metrics of Recommendation Tasks
Journal of Machine Learning Research
by Anja Grumberg, Simay Sian
posted to recommendation by imrenchen on 2010-01-15 08:19:42 along with 1 person

An Item-based Collaborative Filtering Recommendation Algorithm Using Slop One Scheme Smoothing
by Datta Zhang
posted to recommendation by imrenchen on 2010-01-11 11:20:04 along with 1 person

Evaluating Performance of Recommender Systems: An Experimental Comparison
by Francois Fouss, Marco thru
posted to recommendation by imrenchen on 2010-01-11 11:24:02 along with 1 person

Recommendations with prerequisites
In ACM Conference on Recommender Systems (October 2009)
by Aditya Perametwara, Hector Garcia-Molina
posted to recyery recommender: recommendation graph algorithms by imrenchen on 2009-12-24 09:58:05 along with 1 person

Recommending new movies: even a few ratings are more valuable than metadata
What is bX?

- A service which taps into the power of the networked scholarly community to generate **recommendations** based on article usage
- Based on data mining and structural analysis of **aggregated usage data**, across libraries and scholarly information environments
  - Massive repository of user data - growing
- Derives from **research** done at Los Alamos National Laboratory by Johan Bollen and Herbert Van de Sompel
Interest in usage-based measures

• COUNTER – www.projectcounter.org
• SUSHI - www.niso.org/workrooms/sushi
• JISC MOSAIC – www.sero.co.uk/jisc-mosaic.html
• Metrics for scholarly evaluation:
  • UKSG Usage Factors project
    - uksg.org/usagefactors
  • Project MESUR - www.mesur.org
Implicit user contribution

- Circulation data
- Clickstreams, recording a search process
- Actions
  - Item viewed
  - Item downloaded
  - Item sent
  - Item bookmarked
  - Item printed
  - Item stored
“Students like you also borrowed … Harry Potter”
Assessing the possibilities and pitfalls surrounding the exploitation of library user activity data and recommendations

Findings & Recommendations Workshop
Wednesday 18 November at the University of Wolverhampton

Presentation Downloads

Here are the presentations exactly as they were on the day. Thanks to all who attended and to the University of Wolverhampton for their hospitality and organisation. The project is now working towards its final report.

Workshop Agenda
Download (.doc 46KB)

MOSAIC positioning - David Kay (Sero)
Download (.ppt 1.57MB)

Big picture - Paul Miller (Cloud of Data)
Link: http://www.slideshare.net/cloudofdata/unlocking-the-database-of-intentions

Experience - Dave Pattern (University of Huddersfield)
Link: http://www.slideshare.net/davep/mosaic-wolverhampton (has audio commentary)

Technical approaches - Mark van Harmelen (MOSAIC)
Download (.pptx 578KB)
Potential uses of implicit contribution

- Collection development
- Evaluation
- Trend analysis
- Relevance ranking
- Recommendations
bX Demo

Title: Water versus Carbohydrate-Electrolyte Fluid Replacement during Loaded Marching Under Heat Stress.

Full Text
- Full text available via EBSCOhost Academic Search Complete
- Full text available via ProQuest Nursing & Allied Health Source

Holding information
- Holdings in Local Catalog
  - Ex Libris ALEPH catalog
- Holdings in Union Catalogue
  - Union Catalogue of British and Irish Libraries - COPAC

Users interested in this article also expressed an interest in the following:

© 2009 SFX by Ex Libris Inc.
CrossRef Enabled
Title: Water versus Carbohydrate-Electrolyte Fluid Replacement during Loaded Marching Under Heat Stress.

Users interested in this article also expressed an interest in the following:
Title: Water versus Carbohydrate-Electrolyte Fluid Replacement during Loaded Marching Under Heat Stress.

Full Text
- Full text available via EBSCOhost Academic Search Complete
- Full text available via ProQuest Nursing & Allied Health Source

Holding information
- Holdings in Local Catalog
- Holdings in this Union Catalogue

Users interested in this article also expressed an interest in the following:

View More...
Effects of recovery beverages on glycogen restoration and endurance exercise performance.

Title:

Source:


Full text

There is no electronic fulltext available for this item from your library

Holding information

Holdings in Local Catalog

ExLibris ALEPH catalog

Holdings in this Union Catalogue

Union Catalogue of British and Irish Libraries - COPAC

Users interested in this article also expressed an interest in the following:


Link resolver usage logs

• A good basis:
  • Represent users’ information-seeking paths in a standardized way
  • Are across information providers
  • Are across institutions
• There are a lot of them
Link resolver usage paths

- Google Scholar
- A&I databases
- Citation databases
- E-journal publisher site
- E-Book publisher site
- Library interface
- Document Delivery

All paths use OpenURL.
Built on OpenURL

- Usage data –OpenURL context objects-- is harvested from link resolver logs through OAI-PMH
- Build a (very large) aggregate of usage data
- Mine the aggregate to derive scholarly recommender services: a structure describing relationships between scholarly materials is created
- bX receives OpenURL requests
- A list of recommended materials is generated per request
  - open interface - accessible via API
  - viewable via SFX menu, other discovery interfaces
An architecture for the aggregation and analysis of scholarly usage data.

Johan Bollen
Digital Library Research & Prototyping Team
Los Alamos National Laboratory
Los Alamos
NM, 87545
jbollen@lanl.gov

Herbert Van de Sompel
Digital Library Research & Prototyping Team
Los Alamos National Laboratory
Los Alamos
NM, 87545
herbertv@lanl.gov

ABSTRACT
Although recording of usage data is common in scholarly information services, its exploitation for the creation of value-added services remains limited due to concerns regarding, among others, user privacy, data validity, and the lack of accepted standards for the representation, sharing and aggregation of usage data. This paper presents a technical, standards-based architecture for sharing usage information, which we have designed and implemented. In this architecture, usage information is shared and made available to others by means of the OpenURL protocol, which is a simple information query language. The architecture is based on top-down design decisions, but have come to prominently include the analysis of user actions and preferences. The introduction of a wide range of successful evaluation and recommendation services which rely in some way on the analysis of usage data demonstrates that it is possible to learn how users interact with information and find what they need. The availability of usage data opens up new applications and possibilities that go beyond that of recommendation services, and also includes collection development support [4], derivation of metrics to assess the quality and impact of scholarly communication units [3], and trend analysis [14, 5]. Especially for the latter two applications,
More about the interaction with bX

• Request to bX is sent through an API
• Results are returned as
  • XML (default)
  • Text
  • ATOM
  • RSS
Recommendations in Discovery Environments
Recommendations in Discovery Environments

Exploring the Sociopolitical Dimensions of Global Warming

By: Troy D. Sadler; Michelle L. Klosterman

Format: Article, Peer Reviewed

Year: 2009

Published In: Science Activities Classroom Projects and Curriculum Ideas, 45(4), 9-13

Database: ERIC (EBSCO)

Summary

The authors present an activity to help high school students conceptualize the sociopolitical complexity of global warming through an exploration of varied perspectives on the issue. They argue that socioscientific issues such as global warming present important contexts for learning science and that the social and political dimensions of these issues must be featured along with the underlying science. The activity is structured as a jigsaw in which learners explore multiple perspectives on the issue of global warming as they work to develop recommendations for national policy. (Contains 1 table.)

People who read this article also read:

Energy, Environment and Sustainable Development
Recommendations in Discovery Environments

Summary

The authors present an activity to help high school students conceptualize the sociopolitical complexity of global warming through an exploration of varied perspectives on the issue. They argue that socioscientific issues such as global warming present important contexts for learning science and that the social and political dimensions of these issues must be featured along with the underlying science. The activity is structured as a jigsaw in which learners explore multiple perspectives on the issue of global warming as they work to develop recommendations for national policy. (Contains 1 table.)

People who read this article also read:

Energy, Environment and Sustainable Development

- Article:
  - By Abbasi, Mustafa Omer M O
  - Renewable & Sustainable Energy Reviews vol. 12 iss. 9 (2008)
  - Full text available

Global Warming

- Article:
  - By Cantor, Craig C
  - Full text available

Oil Lease Sales Begin Despite Polar Bear Concerns

- Article:
  - By [Anon]
  - Full text available

The Child in the Garden: An Evaluative Review of the Benefits of School Gardening

- Article:
  - By Blair, Dorothy R
  - Libris bx
Recommendations in Discovery Environments

A study of the natural history of back pain: Part I. development of a reliable and ... M Roland, P Morris - Spine, 1983 - journals.lww.com

SPINE • VOLUME 8 • NUMBER 2 • 1983 1982 Yoko Award in Clinical Science A Study of the Natural History of Back Pain Part I: Development of a Reliable and Sensitive Measure of Disability in Low-Back Pain MARTIN ROLAND, M.A., MRCP., MRCGP, * and RICHARD MORRIS, ... Cited by: 1,355 - Related articles - All 2 versions


Methods We performed MRI examinations on 90 asymptomatic people. The scans were read independently by two neuroradiologists who did not know the clinical status of the subjects. To reduce the possibility of bias in interpreting the studies, abnormal MRI scans form 27 -- Cited by: 1,338 - Related articles - All 5 versions - bx.Recommendations

bx | beta Users interested in this article also expressed an interest in the following:


Login to access citations. My List, Citation Database, RawXML, RawArticle, The use of coping...
Benefits of bX Contribution

- Ongoing analysis of SFX usage data created by library users
- Continual improvement of recommendations
- Cooperation with other research library sites – on a grand scale
Over 200 bX customers around the globe
What do people say?

“JSTOR meets Amazon!?”
- ELUNA twitterer

“On May 5, Ex Libris rolled out the shiny new fabulousness that is bX. ... (turns) the Services Menu into a point-of-need discovery tool. I think this is awesome.”
- Jamene Brooks-Kieffer, Kansas State Univ.

“I found exactly what I wanted. I've already found even more relevant articles in 10 minutes than I've found in the last 10 months using more traditional methods of research.”
- Ph.D. student, Arizona State University

“I’m always trying to find new connections between biological systems. This looks like a really useful tool for this discovery. I’m interested in seeing others’ connections. An unknown system can link to one which is well-studied.”
- Laboratory director, University of Ottawa Heart Institute

“One thing I've noticed and got a few comments about is that the increase in amount of recommendations has been noticeable from last summer to now. Now it's much easier (to find recommendations). The recommendations seem ... relevant”
- Systems librarian, FinELib
“The Web, they say, is leaving the era of search and entering one of discovery. What's the difference? Search is what you do when you're looking for something. Discovery is when something wonderful that you didn't know existed, or didn't know how to ask for, finds you.”

Jeffrey M. O’Brien, "The race to create a 'smart' Google"
Thank you!

nettie.lagace@exlibrisgroup.com