

SPLURGE

Scholars Portal Library Usage-Based Recommendation Generation Engine

<http://splurge.scholarsportal.info/static/index.html>

<http://github.com/splurge/splurge>

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<http://hdl.handle.net/10315/18178>

The overview

Recommendation services

SPLURGE demonstration

Scholars Portal Technical Advisory Group

How recommendations are generated

The components: database, API, widget and policies

How we got here

The code

What happens next

The impetus

- Netflix
- Plumperfect.com
- Amazon
- Library Thing: BookPsychic
- BiblioCommons
- University of Huddersfield (JISC: MOSAIC)



AC/DC ACDC Dirty Deeds Done Dirt Cheap Vintag...

C \$31.31

Clear all

cheap junk

stuff I don't want

stuff

stuff I want

junk

recommendation

recommendations

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New Authentic Junk Food AC/DC Dirty Deeds Don...

C \$29.10



The Smurfs Get Some Vintage Style Junk Food

C \$28.37



Number One Drinking Buddy Junk Food Vintage

C \$28.33

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5. TOD'S Loafers
6. Banana Republic Shirts
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8. Nike New Balance Sneakers
9. Ray-Ban Aviator Sunglasses
10. Tommy Hilfinger Polo Shirts



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Face

See More

Eyes

See More



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Recommender system



Create a Page



Redirected from Recommendation engine · Interest

Description

From Wikipedia, the free encyclopedia

Recommender systems or **recommendation systems** are a subclass of **information filtering system** that seek to predict the 'rating' or 'preference' that a user would give to an item (such as music, books, or movies) or social element (e.g. people or groups) they had not yet considered, using a model built from the characteristics of an item (content-based approaches) or the user's social environment (collaborative filtering approaches).

Recommender systems have become extremely common in recent years. A few examples of such systems:

When viewing a product on [Amazon.com](#), the store will recommend additional items based on a matrix of what other shoppers bought along with the currently selected item.

[Pandora Radio](#) takes an initial input of a song or musician and plays music with similar characteristics (based on a series of keywords attributed to the inputted artist or piece of music). The stations created by Pandora can be refined through user feedback (emphasizing or deemphasizing certain characteristics).

[Netflix](#) offers predictions of movies that a user might like to watch based on the user's previous ratings and watching habits (as compared to the behavior of other users), also taking into account the characteristics (such as the genre) of the film.

Overview

Recommender systems typically produce a list of recommendations in one of two ways - through collaborative or content-based filtering. **Collaborative filtering** approaches to build a model from a user's past behavior (items previously purchased or selected and/or numerical ratings given to those items) as well as similar decisions made by other users, then use that model to predict items (or ratings for items) that the user may have an interest in. **Content-based filtering** approaches utilize a series of discrete characteristics of an item in order to recommend additional items with similar properties. These approaches are often combined (see Hybrid Recommender Systems).

Source

Description above from the Wikipedia article [Recommender system](#), licensed under [CC-BY-SA](#) full list of contributors [here](#). Community Pages are not affiliated with, or endorsed by, anyone associated with the topic.

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\$40/Hr - On The Side



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Info

Friend Activity

Wikipedia

99

like this

39003 014687

University of Ottawa

FEV 06 2004

UO FEB 30 2004

SEP 26 2004

NOV 26 2004



APR 14 2009

UO AOU 06 2009

UO AVR 01 2010

SEP 22 2010

~~JUN 20 2010~~

DEC 15 2003

UO NOV 03 2003

09 FEV. 1992

27 FEV. 1992

FEV 1992

NOV 17 1995

DEC 09 1995

Check Out / Prêt

29003006456611

20.59 2012/01/24

1. Virginia Woolf: To the lighthouse : a casebook /
edited by Morris Beja.

39003004812235

Due / Dû: 12-04-11

2. Sons and lovers [by] D. H. Lawrence.

39003003655247

Due / Dû: 12-04-11

3. The French lieutenant's woman / John Fowles. --

39003009472787

Due / Dû: 12-04-11

4. White teeth : a novel / Zadie Smith.

39003023652448

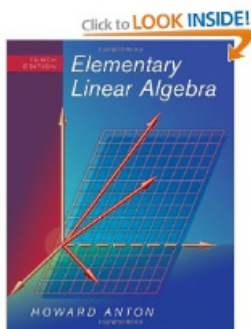
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5. London fields.

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Howard Anton (Author)

★★★★☆ (7 customer reviews) | Like (5)

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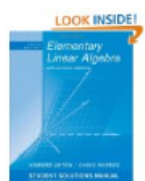
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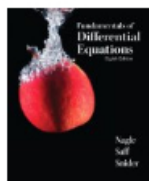
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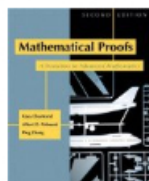
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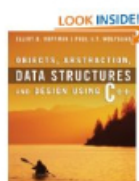
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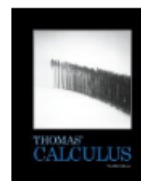
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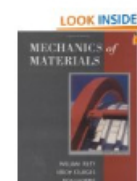
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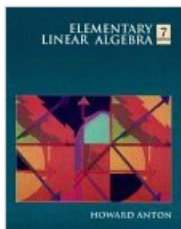
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Elementary Linear Algebra

by [Howard Anton](#)

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Publisher Hoboken, NJ : Wiley, c2010.

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Edition 10th ed.
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Edition: 10th ed.

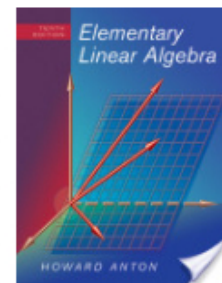
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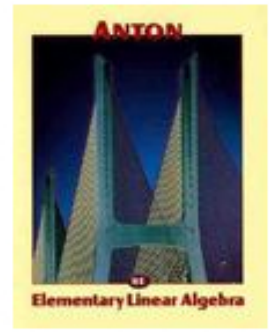
Subjects: Linear Algebra -- Mathematics

Publisher: New York : Wiley, c1981.

Edition: 3d ed.

Notes: Includes index.

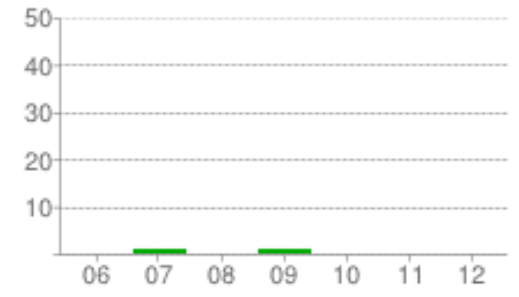
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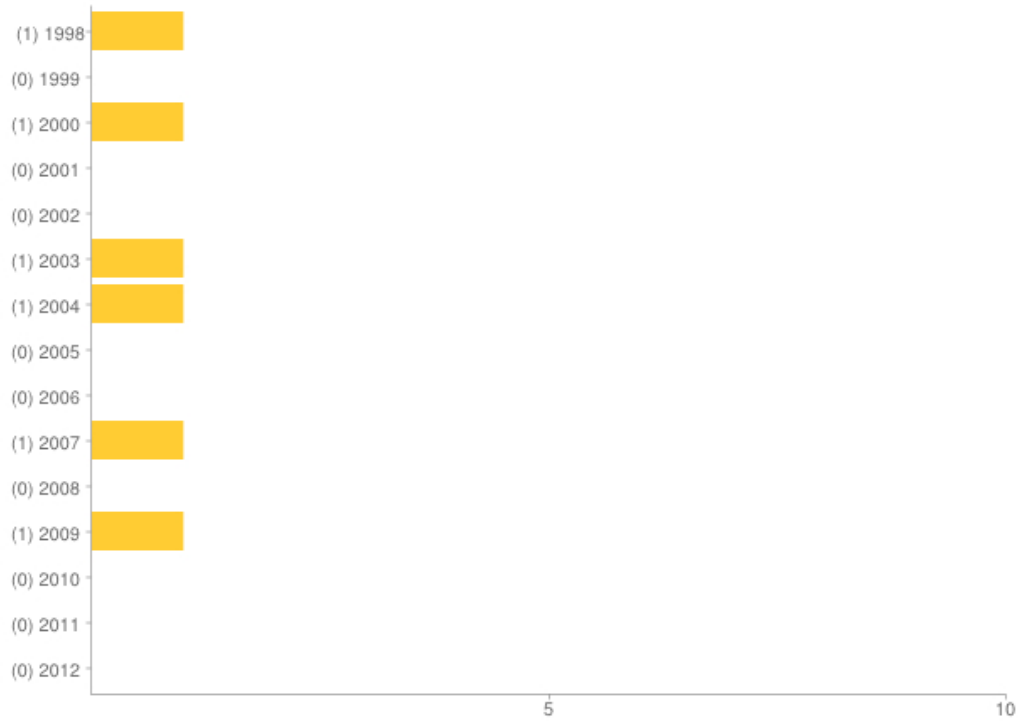
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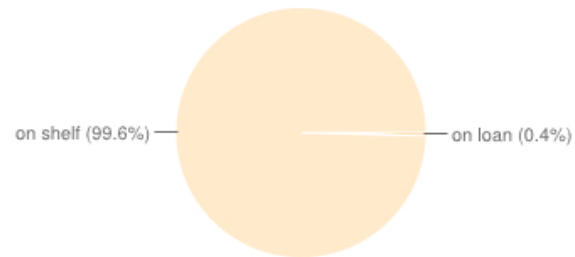


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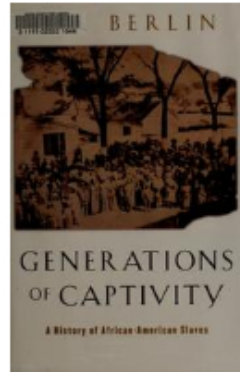
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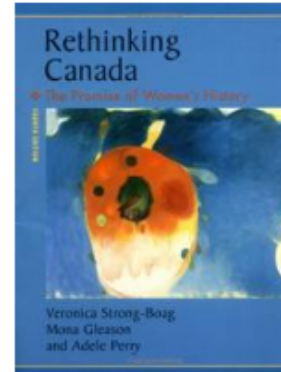
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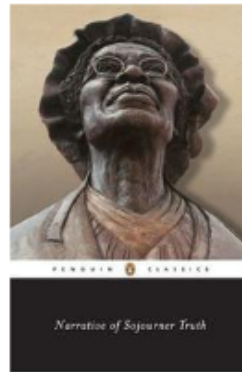
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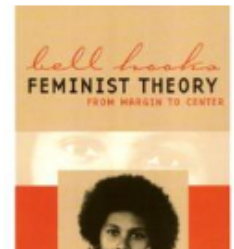
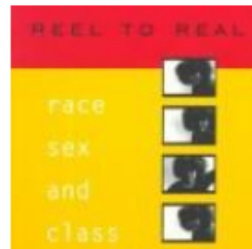
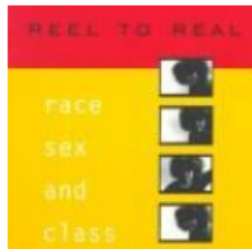


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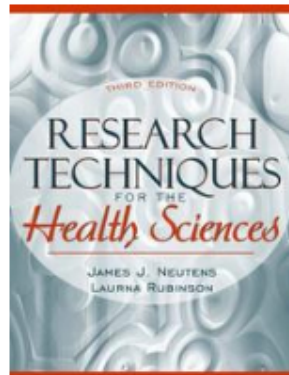


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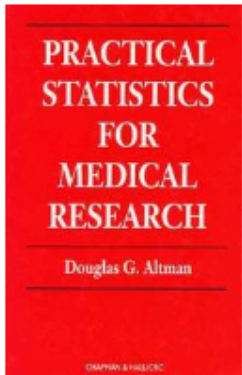
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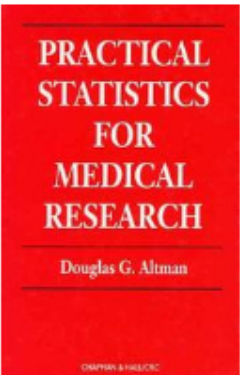
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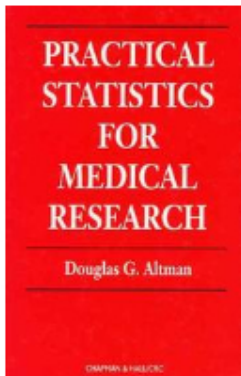
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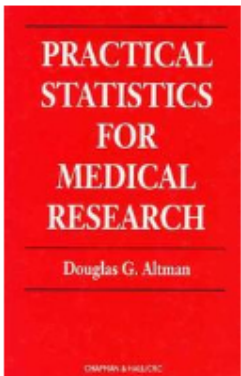


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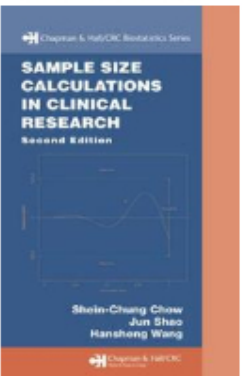
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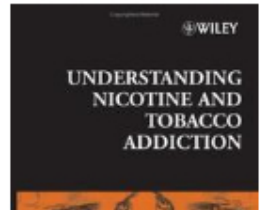
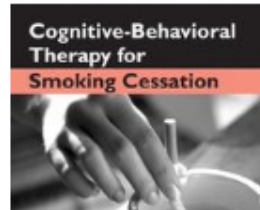
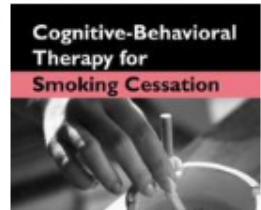
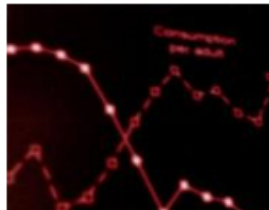
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The group

Scholars Portal Technical Advisory Group

www.ocul.on.ca/node/112

Created in January 2011, TAG has members from 7 institutions in the Ontario Council of University Libraries (OCUL).

Privacy and Anonymization



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Privacy and Anonymization



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How do you get recommendations?



Photo by Andres Rueda

Usage-based recommendations

Our Little Library:

John

Sally

Mark

Julie

Erin

Patron Records:

| Patron ID | Resource ID |
|-----------|-------------|
| John | 34A |
| Sally | 12Z |
| ... | |

Research

Erin

Resource
28X

We Recommend:

?

Check the records

John

31B

59M

28X

18C

19D

14N

Sally

77X

31B

18C

14N

28X

48U

Mark

31B

28X

18C

90V

Julie

28X

67Y

90V

19D

31B

Reduce to deduce

John

31B

59M

28X

18C

19D

14N

Sally

77X

31B

18C

14N

28X

48U

Mark

31B

28X

18C

90V

Julie

28X

67Y

90V

19D

31B

Reduce to deduce

31B

59M

18C

19D

14N

77X

31B

18C

14N

48U

31B

18C

90V

67Y

90V

19D

31B

Reduce to deduce

31B

31B

31B

31B

18C

18C

18C

19D

19D

14N

14N

90V

90V

Research complete

Erin

Resource
28X

We Recommend:

31B

18C

19D

14N

90V

The components

The
Database

The
API

SPLURGE =

The
Widget

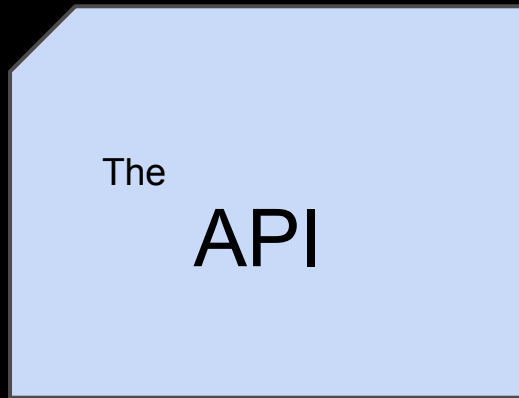
The
Policy

The components

The
Database

- PostgreSQL
- Tables:
 - `item`
 - `transaction`
 - `institution`
 - *caches*

The components



- Python
- Flask Powered Webservice
- Client provides *isbn, institution name, and date range.*

The components

The
Widget

- Javascript
- Queries the API
- 'Lives' in the catalogue
- Loads covers from the OpenLibrary

The first hackfest



The second hackfest



The issues

Problem: Same Work,
different
Manifestations

Solution: Use xISBN,
thingISBN to collapse
to work level.

Problem: Textbook
edition mishigas.

Solution: Same?

The
Database

Problem: ISBNs don't
cover everything.

Solution: Use LC
numbers and
OCLCnums.

Problem: Not enough
data.

Solution: Get more
data.

The issues

Problem: Sometimes it doesn't work.

Solution: Robustify.
Get serious. Web scale.

Problem: Titles and authors are not returned.

Solution: Collect title/author data, and show it.

Problem: No unit tests.

Solution: Make unit tests.

The

API

The issues

Problem: Don't have one line of Javascript for all catalogues and OPACS.

Solution: Make the one line.

Problem: Some books don't have covers.

Solution: Make generic ones that show the title/author.

Problem: Is it fully accessible and meets WCAG 2.0?

Solution: Find out. If not, fix.

Problem: No documentation.

Solution: Documentify.

The
Widget

The issues

Problem: Data is not available under open data license.

Solution: Go back to OCUL libraries, discuss, get them to resubmit.

Problem: Data is not anonymous.

Solution: Anonymize it.

Problem: Worries about usage of open service by non-OCUL people.

Solution: This is not a problem!

The
Policy

The code

The screenshot shows the GitHub interface for the repository 'splurge / splurge'. At the top, there is a search bar and navigation links for 'Explore', 'Gist', and 'Blog'. The user 'wdenton' is logged in. The repository name 'splurge / splurge' is displayed, along with buttons for 'Pull Request', 'Unwatch', 'Unstar' (1), and 'Fork' (1). Below this is a navigation bar with tabs for 'Code', 'Network', 'Pull Requests' (1), 'Issues' (1), 'Wiki', 'Graphs', and 'Admin'. The 'Code' tab is selected, showing the repository name and a 'Read more' link. Below the repository name, there are download options: 'ZIP', 'HTTP', 'SSH', 'Git Read-Only', and 'Read+Write access'. The 'Git Read-Only' option is selected, showing the URL 'https://github.com/splurge/splurge.git'. At the bottom, there is a 'branch: master' dropdown, 'Files', 'Commits', 'Branches' (4), 'Tags', and 'Downloads' links.

<https://github.com/splurge/splurge>

splurge@googlegroups.com

Help wanted:
Database

Help wanted:
API

Help wanted:
Widget

Help wanted:
Policy

SPLURGE

Scholars Portal Library Usage-Based Recommendation Generation Engine

<http://splurge.scholarsportal.info/static/index.html>

<http://github.com/splurge/splurge>

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