Onder de motorkap van Recommender Systems

Maurits @vanderGoes
Tinder
You have a secret Tinder rating — but only the company can see what it is

I FOUND OUT MY SECRET INTERNAL TINDER RATING AND NOW I WISH I HADN’T

Tinder is secretly scoring your desirability and picking matches that are in your league
## Elo-rating

<table>
<thead>
<tr>
<th>ELO RATING</th>
<th>1-WEEK CHANGE</th>
<th>TEAM</th>
<th>DIVISION</th>
<th>MAKE DIV. ROUND</th>
<th>MAKE CONF. CHAMP</th>
<th>MAKE SUPER BOWL</th>
<th>WIN SUPER BOWL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1730</td>
<td>+27</td>
<td>Carolina 17-1</td>
<td>NFC South</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>59%</td>
</tr>
<tr>
<td>1671</td>
<td>+9</td>
<td>Denver 14-4</td>
<td>AFC West</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>41%</td>
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<tr>
<td>1666</td>
<td>-27</td>
<td>Arizona 14-4</td>
<td>NFC West</td>
<td>✓</td>
<td>✓</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>1656</td>
<td>-9</td>
<td>New England 13-5</td>
<td>AFC East</td>
<td>✓</td>
<td>✓</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>
Tapestry
(a) Electronic mail overload
(b) Using distribution lists
(c) Conventional filtering
(d) Collaborative filtering

(Goldberg et al, 1992)
Amazon
Hello! Shopping at Amazon.com is 100% secure—guaranteed.
Already a customer? Sign in.

Vote in our Millennium Poll—you could win 300 CDs, books, and videos!

In Books
Test Case
The postwar inventors of the Scholastic Aptitude Test hoped to produce a brainier brand of meritocracy in the United States. But as Nicholas Lemann reveals in The Big Test, the SAT hit a great many ideological potholes—and ended up creating yet another, pencil-pushing elite. Go to Books

In 2Shops
Many Merchants, Fabulous Finds
Earth's Biggest Selection just got bigger! You'll discover an amazing array of products from merchants large and small, including:
- A library of literature
- Scads of sports stuff
- A cornucopia of costume jewelry
...and so much more. Go to 2Shops

In Toys & Games
Halloween Headquarters
Dare to be a T-Rex—or a hippie or a pumpkin—with the costumes and accessories for kids and adults in our Halloween Boutique. You'll also find decorations, party supplies, and more. Go to Toys & Games
### Leaderboard

Showing Test Score. [Click here to show quiz score]

Display top ▼20▼ leaders.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Team Name</th>
<th>Best Test Score</th>
<th>% Improvement</th>
<th>Best Submit Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>BellKor’s Pragmatic Chaos</strong></td>
<td>0.8567</td>
<td>10.06</td>
<td>2009-07-26 18:18:28</td>
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<tr>
<td>2</td>
<td><strong>The Ensemble</strong></td>
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<td>2009-07-26 18:38:22</td>
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<td><strong>Grand Prize Team</strong></td>
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<tr>
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<td><strong>Opera Solutions and Vandelay United</strong></td>
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<td>9.84</td>
<td>2009-07-10 01:12:31</td>
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<tr>
<td>5</td>
<td><strong>Vandelay Industries !</strong></td>
<td>0.8591</td>
<td>9.81</td>
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</tbody>
</table>
Part-up
Discover 454 part-ups

Vitamine C, connecting local women and refugee women
We want to create a tool that will connect refugee women with local women for joined creation of a new society.

De beste ambassadeur
Hoe kunnen wij als Lindenhout medewerkers goede ambassadeurs zijn? Lindenhout wil zorgen voor jeugd in Gelderland. Wie wil moedigen? Hoe vinden we deze ambassadeurs? Denk mee!

Succesvolle invoering van part-ups in jouw organisatie
Gemeente Amsterdam Oost gaat part-ups als werkwijze invoeren in onze organisatie. Ik zoek mensen die hier al ervaring mee hebben om samen een stappenplan op te stellen voor een succesvolle invoering van dit instrument. What are your lessons learned?

Event 'New ways to organize'
Ik wil graag organisaties die zich aan het beraden, of al aan het experimenteren zijn hoe ze anders het werk kunnen organiseren voorzien van inspiratie die hen verder helpt om stappen te zetten in deze ontwikkeling.
Item-based collaborative filtering

Voorspelde deelnemerscore: 3.6

Voor het overzicht zijn enkele relaties weggelaten.
Challenges

Data sparsity (Cold start)

Gray sheep

Scalability

Shilling attacks

Synonymy
Discussie

Speaker Deck: vdgo.es/DataDon
Must reads

➢ I Found Out My Secret Internal Tinder Rating And Now I Wish I Hadn't
➢ Using collaborative filtering to weave an information Tapestry
➢ Amazon. com recommendations: Item-to-item collaborative filtering
➢ Item-based collaborative filtering recommendation algorithms
➢ The bellkor solution to the netflix grand prize
➢ Matrix factorization techniques for recommender systems
➢ Tastemaker: How Spotify’s Discover Weekly cracked human curation at internet scale