Reputation, Trust and Recommender Systems

15.575
Tanu Ghosh
4th March 2004
Agenda

- Overview
- eBay executives
- Resnick and Zeckhauser
- Dellarocas (Word of Mouth)
- Break
- Chris Dellarocas
Problems with online transactions

- **Adverse selection**
  - Do I really want to buy this good? What type does this party/good belong to?

- **Moral hazard**
  - Will my partner change his behavior once we enter the transaction?
Tailor-made recommender systems

I want to know what books to read

What are some of the books you like?

Here are some that you may like
Book search example via: http://www.amazon.com/
(Screenshot removed.)
Free Ratingzone Membership: Optional Registration

You are on your way to getting the most accurate, personalized recommendations on earth - FREE!

Before you start rating, please create your Ratingzone account. Your Ratingzone Account allows you to:

- **View Your Recommendations** - Get INSTANT access to your recommendations!
- **Save Your Ratings** - We'll remember your ratings for your next visit!
- **Remember Your "Favorites"** - Organize your favorite items into one area!
- **Optional Recommendations Email** - At your option, we will email your recommendations monthly!
- **Requires **NO** Personal Information!**

[Yes! I will register now, and then start rating!](#)  [No, I will register once I have predictions!](#)

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Having a hard time finding the item you have in mind to rate? Try searching ![Trying to find an item in your mind](#)!

Search for a title: [Search]  
Search for a person or group: [Search]

"Your site keeps getting better...I use it ALL THE TIME!!" - Steve  
Tell A Friend!

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Now with over 3,500,000 ratings in all medias!

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**Movies** : Your Recommendations

( View Your Movie Recommendations | View Your Recommendations By Category )

These are your Movie Recommendations!!
You have 193 recommendations! - These recommendations are generated just for you based on your previous ratings! If you have seen any of these titles, choose the "Rate your Movies Recommendations" link and enter your rating! More ratings will help generate even more accurate recommendations!

( Rate Movies | Movies You Have Rated | Your Movie Recommendations )

<table>
<thead>
<tr>
<th>Title</th>
<th>Actor</th>
<th>Year</th>
<th>More info</th>
<th>Category</th>
<th>Predicted For You</th>
<th>Choose Your Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desperate Hours</td>
<td>Bogart, Humphrey - March, Fredric</td>
<td>1955</td>
<td>( more info )</td>
<td>Drama, Suspense/Thriller</td>
<td>9.8</td>
<td>N/A</td>
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<tr>
<td>Shawshank Redemption, The</td>
<td>Robbins, Tim - Freeman, Morgan</td>
<td>1994</td>
<td>( more info )</td>
<td>Drama</td>
<td>9.7</td>
<td>N/A</td>
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<td>Primal Fear</td>
<td>Greer, Richard - Linney, Laura</td>
<td>1996</td>
<td>( more info )</td>
<td>Drama, Suspense/Thriller</td>
<td>9.6</td>
<td>N/A</td>
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<tr>
<td>Stand By Me</td>
<td>Phoenix, River - Wheaton, Wil - O'Connell, Jerry - Feldman, Corey</td>
<td>1996</td>
<td>( more info )</td>
<td>Action/Adventure, Drama</td>
<td>9.5</td>
<td>N/A</td>
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<tr>
<td>Raiders of the Lost Ark</td>
<td>Ford, Harrison - Aller, Karen</td>
<td>1981</td>
<td>( more info )</td>
<td>Action/Adventure, Sci-Fi/Fantasy</td>
<td>9.5</td>
<td>N/A</td>
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<tr>
<td>Roman Holiday</td>
<td>Peck, Gregory - Hepburn, Audrey</td>
<td>1953</td>
<td>( more info )</td>
<td>Classic, Romance</td>
<td>9.5</td>
<td>N/A</td>
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</tbody>
</table>
Generic recommendation systems

- Expert
- Community
- Hybrid
Removed: screenshot of powershot A70 from http://www.epinions.com/
Some issues with these systems

- Privacy
- Algorithmic
- How many times do you really use these systems and can these ever replace the role of a friend’s recommendations?
Other questions..
How can we prevent free riding?
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How to elicit honesty?
Ask any question! Allexperts.com is the oldest & largest free Q&A service on the Internet

**Category:** Monroe, Marilyn

<table>
<thead>
<tr>
<th>Name</th>
<th>Expertise</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yvonne</td>
<td>I can answer questions on most of Marilyn's life, particularly her early</td>
<td>Available</td>
</tr>
<tr>
<td></td>
<td>years and the late fifties/early sixties. I have read a great deal on the</td>
<td>Ask A Question</td>
</tr>
<tr>
<td></td>
<td>conspiracy theories concerning her death.</td>
<td></td>
</tr>
</tbody>
</table>

**Related Links**

- Previously asked questions
- Message Board
- Volunteer to be an expert in this category
- Can't find the answer you're looking for here? Click here to try our partner site, About.com!

Like our site? Recommend us to your friends!
**Expert Details:** Monroe, Marilyn

**Hollywood Insider:** Yvonne

**Expertise:**
I can answer questions on most of Marilyn’s life, particularly her early years and the late fifties/early sixties. I have read a great deal on the conspiracy theories concerning her death.

**Life Experience**

**Experience in the area**
I have been a fan of Marilyn Monroe’s for over ten years now, and have accumulated a sizeable collection of books and documentaries on her.

**Organizations belong to**
I belong to three different Marilyn internet groups.

**Education/Credentials**
I have degrees in Modern History and English. In the latter subject I studied film theory and completed my exam essay on Marilyn Monroe (movie screen as mirror) gaining a first.

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**Prestige**

<table>
<thead>
<tr>
<th>General Prestige</th>
<th>170</th>
</tr>
</thead>
</table>

**Average Ratings from Other Users of AllExperts**

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>9</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarity of Response</td>
<td>9.5</td>
<td>Best of the best</td>
</tr>
<tr>
<td>Timeliness</td>
<td>9</td>
<td>Excellent</td>
</tr>
<tr>
<td>Politeness</td>
<td>10</td>
<td>Best of the best</td>
</tr>
</tbody>
</table>

**Number Of Questions (in Last 24 Hours)**
0

**Max Number of Questions to be Asked (in 24 Hour period)**
5

**Total Number of Questions (since joining AllExperts)**
18

**Numerical Ratings from Other Users of AllExperts**

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Clarity</th>
<th>Time</th>
<th>Polite</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>8</td>
<td>9</td>
<td>8</td>
<td>10</td>
<td>05/20/03</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>05/20/03</td>
</tr>
</tbody>
</table>

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*Courtesy of allexperts.com.*
Can volatile identities be restricted?
Still more questions

- Why isn’t there enough negative feedback?
- Do we want more negative feedback?
- What are some ways that you have seen (or tried) to beat the system?
- Some other innovative systems?
- Is there a way to aggregate ratings from the WWW to one centralized repository?
- What is the role of brands in the age of online reputation systems?
The big Question...

- Why does this system still work??
Trust Among Strangers in Internet Transactions: Empirical Analysis of eBay's Reputation System by Resnick & Zeckhauser
Surprising findings

- Large number of distinct buyer-seller combination
- Huge positive feedback, few negative comments
- Past performance significant in predicting present performance
- High initiation costs—not in terms of monetary entry fee but loss of reputation
Questions...

• Shouldn’t eBay have some entry costs to prevent volatile identities?
• Should eBay look for ways to increase the negative feedback?
• Should eBay give more prominence to negative feedback?
• What about value of a seller’s transactions?
• Relationship between age and salability— is it trust or just better experience?
The Digitization of Word of Mouth: Promise and Challenges of Online Feedback Mechanisms by Chrysanthos Dellarocas
Questions...

• What happens if historical events are reported truthfully but buyers feel that they aren’t truthful?
• What happens if they are false but buyers feel that they are truthful?
• What are some good feedback mediators?
  – Should we have emphasize recent past?
"Reputation systems are the worst way of building trust, except for all those other ways that have been tried from time to time."

Churchill misquoted in Resnick et al. 2000