Privacy, Reputation and Trust: Implications of Scoring Systems

Thomas Schaberreiter, Veronika Kupfersberger
Support building trust and reputation in situations where traditional methods are not possible
- Online retail, social media, discussion forums, comment systems, ...

Types of scoring
- Customer -> Product/Content
- Customer -> Seller/Provider
- Seller/Provider -> Customer

Evaluation of scores
- Trust in the quality of a product
- Reputation of sellers/customers
Building Web Reputation Systems 1st Edition
by Randy Farmer (Author), Bryce Glass (Author)

Commercial Scoring Systems

ISBN-10: 059615979X
Why is ISBN Important?

Have one to sell? Sell on Amazon

Add to List

<Embed>
Building Web Reputation Systems

by Randy Farmer (Author), Bryce Glass (Author)

10 customer reviews

5 star 50%
4 star 20%
3 star 20%
2 star 0%
1 star 10%

Review this product
Share your thoughts with other customers

Write a customer review

Read reviews that mention
- reputation systems
- web reputation
- read this book
- users
- authors
- ratings
- user
- discussion
- examples
- useful
- community

Showing 1-5 of 10 reviews

VINE VOICE

Basic and Yahoo Centric
June 22, 2013
Format: Paperback Verified Purchase

The book on web reputation systems is getting a bit long in the tooth, having been written about 4 years ago. Much of the information that is contained in here, including and especially the psychology elements of the users as well as the pitfalls and design considerations - are still relevant since they apply to basic human psychology and behaviors.

From a technology perspective, as noted by a few of the more recent reviewers, the information is now getting dated and the Web 2.0 technology architecture that is out there today is not contained in this book at all. So, while the principles hold, the practices will need to be updated. Additionally, because the book was published by Yahoo Press, the case studies and many of the elements of the examples are very focused on Yahoo. In and of itself, that's not a problem, but the book may have been more interesting and relevant by really pulling in a much broader example base, and different case studies that weren't so Yahoo centric.

All in all, if you have an interest in the topic, it is probably an interesting read for background, overview and psychologic/behavioral purposes.

5 people found this helpful

A deep, insightful, and well-presented treatment of on-line reputation models
August 3, 2010
Format: Paperback Verified Purchase

I'm researching different models to use for our corporate collaboration platform and I'm looking to implement a social recognition/reputation framework. Our framework needs to make sense for users and content in many different businesses and support functions. It's one thing to rate things on Amazon and Netflix and another to deploy a system inside an enterprise. I'd also researched peter Reiser's "Community Equity" [...]
Commercial Scoring Systems

67% positive lifetime (5 total ratings)

is committed to providing each customer with the highest standard of customer service.
Commercial Scoring Systems

Have a question for [redacted]?
Ask a question

67% positive lifetime (5 total ratings)

committed to providing each customer with the highest standard of customer service.

Feedback
Returns & Refunds Shipping Policies Help Products

Book arrived in a timely manner, in better condition than stated and properly packaged. Would do business with again.

After ordering, the seller canceled the order, told Amazon the customer was the one who canceled it, and then re-listed the item at a significantly higher price...
Read more
By [redacted] on July 8, 2013.

I did not realize I had indicated to Amazon that customer had cancelled the order. I had cancelled it because I had just recently listed it and couldn't locate...
Read more
By [redacted] on August 1, 2013.

The book was brand new, although it came a business day late.
By [redacted] on September 29, 2011.

<table>
<thead>
<tr>
<th>Feedback Rating</th>
<th>30 days</th>
<th>90 days</th>
<th>12 months</th>
<th>Lifetime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>67%</td>
</tr>
<tr>
<td>Neutral</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Negative</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>33%</td>
</tr>
<tr>
<td>Count</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>
Commercial Scoring Systems

• So, how well do they work?
  – For the most part, OK(ish) …

• And what could possibly go wrong?
  – A large factor is the individual perception of such scores
  – A guideline often becomes irrevocable fact
  – Conflict and misunderstanding is harder to resolve than in person
  – Targeted attacks either raise or lower trust/reputation
Credit Scoring

• Their goal is to imply **trust**

• Can influence
  – Credit limit on cards
  – Reception of loans and their amount
  – Amount of deposit for apartment
  – Type of cell phone contract
  – Signing electricity contracts

• Alternatives
  – Blacklisting
  – Credit scoring for businesses (likelihood of bankruptcy)
Credit Scoring

- **FICO score**
  - payment history
  - current level of indebtedness
  - types of credit used
  - length of credit history
  - new credit accounts

- **VantageScore 3.0**
  - Created by TransUnion
  - credit card use (best below 30%)
  - payment history
  - credit age
  - total number of accounts
  - hard inquiries

---

https://en.wikipedia.org/wiki/Credit_score_in_the_United_States#FICO_score

https://www.creditkarma.com/credit-cards/i/vantagescore-30/
Credit Scoring

• How can social implications for a person without a credit score be prevented?

• If individuals can manipulate credit score in their favor, how high is the quality of these scores?

• What are the effects of grave mistakes in parameter assignment and how can they be corrected and prevented?

• If employers base their recruiting decisions on these scores - is this relevant information on potential employees?
Social Scoring

• Can it get any more personal than that?
  – What if an automatic scoring system measures your worth to society based on the digital traces you leave?

• Possible Implications
  – A worthy individual is welcomed into society
  – An unworthy individual is excluded from society
• The Chinese example
  – China has planned the most extensive social scoring to date, but can in general happen anywhere
  – Reliable information is hard to come by - hard to distinguish what is real and what is science-fiction

• Social credit system - A social score card for citizens
  – Governmental data as well as data from private companies
  – Trials are already running on a large scale, the system is intended to be operational by 2020
• Some potential data sources
  – On-line history
  – Financial records
    • AliPay data already now
  – Criminal, academic and medical records
  – State security assessment
  – Data from extensive surveillance system
    • Facial recognition
    • Behaviour analysis (what you put in shopping cart will influence your social score)
  – Who you socialize with or date/marry will influence your social score
Social Scoring

• People with high social scores gain privileges that are not available to those with low scores
  – Train and Airplane tickets
  – Online shopping

• Can a scoring system at such a massive scale really work reliably, and can it better society?
  – This is a great experiment - Impossible to foresee all the implications.
• What can be potential problems?
  – Can an automatic system be trusted to always be right?
    • We have seen from more established scoring system concepts that flaws may have devastating effects on individuals
  – Is a metric like this warranted to justify the massive invasion in privacy of the individual?
  – Can individuals be trusted to behave honestly towards the system?
    • We have seen again and again that ways are found to influence automatic system one way or another
  – Can those in charge be trusted to balance the system fairly?
  – Can such a system judge each individual equally or is it inherently biased against those with different views?
Finnish banking example – behaviour scoring
Finnish banking example – behaviour scoring

Hey,

Nordea applies statistical risk management methods to perform customers' credit scoring and to make credit decisions. These methods help to produce an overall view of a customers repayment ability. Statistical modelling is part of Nordeas credit risk management and also reported to the supervisory authorities, ensuring the anonymity of individual customers featured in the reports. The statistical models used to evaluate customers repayment abilities are Nordea's internal methods and thus subject to business secrecy.

Best regards,

Nordea Bank Abp,
Privacy, Reputation and Trust: Implications of Scoring Systems

And this happens close to us ...

AMS Austria -
scoiring of job chances

<table>
<thead>
<tr>
<th>Term</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE_INT</td>
<td>1</td>
</tr>
<tr>
<td>0.14 x GESCHLECHT_WEIBLICH</td>
<td></td>
</tr>
<tr>
<td>0.13 x ALTERSGRUPPE_30_49</td>
<td></td>
</tr>
<tr>
<td>0.70 x ALTERSGRUPPE_50_PLUS</td>
<td></td>
</tr>
<tr>
<td>0.16 x STAATENGRUPPE_EU</td>
<td></td>
</tr>
<tr>
<td>0.05 x STAATENGRUPPE_DRITT</td>
<td></td>
</tr>
<tr>
<td>0.28 x AUSBILDUNG_LEHRE</td>
<td></td>
</tr>
<tr>
<td>0.01 x AUSBILDUNG_MATURA_PLUS</td>
<td></td>
</tr>
<tr>
<td>0.15 x BETEUUNGSPLIGHTIG</td>
<td></td>
</tr>
<tr>
<td>0.34 x RGS_TYP_2</td>
<td></td>
</tr>
<tr>
<td>0.18 x RGS_TYP_3</td>
<td></td>
</tr>
<tr>
<td>0.83 x RGS_TYP_4</td>
<td></td>
</tr>
<tr>
<td>0.82 x RGS_TYP_5</td>
<td></td>
</tr>
<tr>
<td>0.67 x BEEINTRÄCHTIGT</td>
<td></td>
</tr>
<tr>
<td>0.17 x BERUFRSGRUPPE_PRODUKTION</td>
<td></td>
</tr>
<tr>
<td>0.74 x BESCHAFTIGUNSTAGE_WENIG</td>
<td></td>
</tr>
<tr>
<td>0.65 x FREQUENZ_GESCHAFTSFALL_1</td>
<td></td>
</tr>
<tr>
<td>1.19 x FREQUENZ_GESCHAFTSFALL_2</td>
<td></td>
</tr>
<tr>
<td>1.98 x FREQUENZ_GESCHAFTSFALL_3_PLUS</td>
<td></td>
</tr>
<tr>
<td>0.80 x GESCHAFTSFALL_LANG</td>
<td></td>
</tr>
<tr>
<td>0.57 x MN_TEILNAHME_1</td>
<td></td>
</tr>
<tr>
<td>0.21 x MN_TEILNAHME_2</td>
<td></td>
</tr>
<tr>
<td>-0.43 x MN_TEILNAHME_3</td>
<td></td>
</tr>
</tbody>
</table>

Source: https://derstandard.at/2000089720308/Leseanleitung-zum-AMS-Algorithmus
And this happens close to us ...

AMS Austria - scoring of job chances

Source: https://derstandard.at/2000089925698/Berechnen-Sie-Ihre-Jobchancen-so-wie-es-das-AMS-tun
And this happens close to us ...

AMS Austria - scoring of job chances

Source: https://derstandard.at/2000089925698/Berechnen-Sie-Ihre-Jobchancen-so-wie-es-das-AMS-tun
• An AI Lie Detector Is Going to Start Questioning Travelers in the EU
  – Trial runs in Hungary, Latvia and Greece
  – Questions include
    • What’s in your suitcase?
    • If you open the suitcase and show me what is inside, will it confirm that your answers were true?
  – 38 micro-gestures are used for scoring each response
  – customized according to the traveler’s gender, ethnicity, and language

Source: https://gizmodo.com/an-ai-lie-detector-is-going-to-start-questioning-travel-1830126881
An AI Lie Detector Is Going to Start Questioning Travelers in the EU

- Trial runs in Hungary, Latvia and Greece
- Questions include
  - What’s in your suitcase?
  - If you open the suitcase and show me what is inside, will it confirm that your answers were true?
- 38 micro-gestures are used for scoring each response
- customized according to the traveler’s gender, ethnicity, and language

Source: https://gizmodo.com/an-ai-lie-detector-is-going-to-start-questioning-travel-1830126881
• Split into groups of 4-5
• Select topic
• Research implications of scoring systems to your group in regards to privacy, reputation and trust
• Present the most intriguing findings to your colleagues

Schedule
13:00 - 13:30 Introduction to Scoring Systems
13:30 - 15:00 Research
15:00 - 16:00 Presentations