Overview

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Motivation

• A large number of B2B sites are already in existence, offering a wide variety of functionality enabling trading of goods and services. In the near future, we expect this number to increase even further leading to a very competitive sales environment.

• We propose a B2B platform that assists in sales of goods and services
IMPLEMENTATION DETAILS

- REST API
- Spring Framework and Hibernate
- MySQL databases
- Advanced REST Client plugin.
Business Logic - Discount calculation at Middleware

- Bayesian average to calculate the discount from rating and loyalty.

\[
\text{rating} = \frac{C \times m + \sum \text{reviews}}{C + N}
\]

- Transaction Value Ratio

\[
\text{Transaction Value Ratio} = \frac{\sum \text{All Transactions by Service Provider}}{\sum \text{Total Sales of the Web Application}}
\]

- Number of Transactions Ratio

\[
\text{Number of Transactions Ratio} = \frac{\sum \text{Number of Transactions by Service Provider}}{\sum \text{Total number of transactions}}
\]

= %Discount
## USE CASES AND RESULTS

<table>
<thead>
<tr>
<th>Average Rating</th>
<th>Number of Ratings</th>
<th>Total Value of Transaction by Service Provider</th>
<th>Total Number of Transactions by Service Provider</th>
<th>Discount Calculated by Middleware</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5</td>
<td>1500</td>
<td>$5000</td>
<td>20</td>
<td>11%</td>
</tr>
<tr>
<td>5</td>
<td>500</td>
<td>$500</td>
<td>10</td>
<td>4.5%</td>
</tr>
</tbody>
</table>
RELATED WORK AND REFERENCES

- A platform for business-to-business sell-side, private exchanges and marketplaces by J. Sairamesh and C. Bender
- Service Communities: Applications and Middleware by Stefan Tai - IBM Research
- Computing a Bayesian Estimate of Star Rating Means - Benjamin Bengfort
- Bayesian Model Averaging by Jennifer A. Hoeting, David Madigan
THANK YOU