# HW4: User Generated Content

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1. a.) I would want to try to create a customized rating for each user, based on criteria that we know about the user. There are three ways to do this. We know a user’s friends are using Trip’s Facebook Connect feature. We can also look at the user’s ratings and the user’s friend’s ratings.

First, I would prioritize reviews by the user’s friends and the users’ friends’ reviews.

Second, I would also use the user’s other reviews and user’s friend’s reviews to try and categorize the person. I would then prioritize ratings from users like the user. For example, this user seems to go to a lot of business hotels. I would then show reviews from other business travelers higher.

I could also use a Netflix-style algorithm, where I use the user’s ratings to find similar users (that the user does not necessarily know) without categorizing the person. I would then prioritize the ratings from those users.

In all cases, the rating would also be sorted by traditional criteria (recency, how many other reviews the user wrote). I will not go in to details for space reasons.

b.) A social algorithm for the first proposal: This is a component in a larger rating algorithm.

$$5\left(users^{'}friend review\right)+3\left(user is in same category as user\right)+2\left(users^{'}friends^{'}reviews\right)+1 (other reviews)$$

For details on how Netflix’s algorithm works, see <http://www.technologyreview.com/business/17587/>

1. a.) A site could use numerous tricks to identify fraudulent reviews. In the reading, they talked about finding users who signed up, left one review, than never returned to the site. TripAdvisor found that 97% of people will return to the site. If the person does not return, you can subtly de-weight it in the rating (add to above formula) and move it further down the review page.

With the newer Facebook Connect feature, you could also penalize accounts that do not have friends. Actually it is probably better to do the inverse: give accounts with more ratings and more friends a higher weight.

b.) Under my system, TripAdvisor does not need to display a message. They only need to subtlety deemphasize suspect reviews. The message could be reserved for when they have a high degree of confidence that the hotel is engaging in fraudulent activity.

c.) TripAdvisor wants to avoid false positives. They do not want to accuse hotels of being engaged in behavior they are not doing.

1. It may be harder to distinguish fraudulent negative reviews because there are often many legitimate negative reviews. It is also happening on a separate hotel’s page, getting more parties involved. However, sometimes fraudulent negative reviews mention a property one could try instead - this could be the guilty party.

Regardless, fraudulent negative reviews share similar patterns to fraudulent positive reviews and could be detected in the same way.

1. a.) The behavior is similar to before. However, now that person can post a lasting online review that many more people will see.

b.) The hotel can let the customer go ahead, and then post a response to their review. If they have enough positive reviews, the extra negative review won’t matter much once a user is looking at the review page. Businesses realize that every customer won’t be happy, but if ~90-95% are than that is good for most customers. Or get your customers to fight back. See Carnival Cruises’ <http://johnhealdsblog.com/> and his Facebook stream.

One hotel I stayed at encouraged me to rate it on Yelp when I checked out. I did. 5 stars.

c.) The rating could still go down – and less people will book. The consequences you are talking about might result from a more aggressive policy – such as refunding anyone who complains. This could breed this behavior – causing a loss of revenue as people come to expect getting a refund.

1. Well first off, there is a difference between a hotel’s star rating and the rating on TripAdvisor. Hotel star ratings, including the type the British government runs, are usually based off the amenities the hotel has. TripAdvisor ratings show how the hotel performs versus expectations. For example, a rude doorman might get you a 5 star rating from having doorman service “on paper”, but a low rating on TripAdvisor because actually the service is bad.

I looked at the Burj al Arab. It looks like it is suffering from too-high expectations. People are taking a star off for minor infractions because the reputation of the place and the price you pay makes you expect that it is perfect. In addition, because the hotel restricts access to paying guests, this annoys some people.

b.) See above. I think it is the factors I mentioned above, which are not necessarily the ones highlighted in the reading.

c.) I would suggest no changes. The tourist restriction is good to maintain the atmosphere of the hotel. Other than fix up the little things, which they know to do already, I don’t think there is much they can do to improve.

d.) My understanding of the system is that it is based on a checklist of amenities – not how the amenities actually are. I think the checklist of amenities is still kind of helpful. I would stop any inspection programs, but allow hotels to fill out the checklist on their own. This should not cost much money to run.