Yammer Data Dashboard

This is a demo to show how I build a data dashboard to help the leadership and operation teams to efficiently understand metrics of the products, as well as find out possible causes that change metrics.

Yammer is a social network for communicating with coworkers. Individuals share documents, updates, and ideas by posting them in groups. The data used here is fake due to privacy protection, but the trends are similar.

KEY METRICS

Activated Users ACCUMULATED OVER TIME	Activated Users ADDED IN THE LAST WEEK	WAU OF YESTERDAY
9.4K	266	1.2K
	▲2.70%	▼0.83%

The dashboard consists of two different parts, user acquisition and retention. User acquisition focuses on bringing new users to the product. User retention focuses on keeping current users engaged inside the product. The two parts will collectively indicate the performance of the business.

At yammer, activated users are the key metric for user acquisition, whereas weekly active users (WAU) for user retention. Both metrics are also along with a colored flag to indicate the change compared to the previous time unit.

User Acquisition

In the real world, user acquisition consists of at least two steps: how to bring traffic to the product and how to convert traffic to registered/activated users. In the first step, methods like paid traffic and organic traffic will be evaluated the efficiency to bring traffic. Overall customer acquisition cost(CAC) is also involved to indicate the performance of the cost to achieve a paid user. In the second step, the registration process is often like a funnel. Users go through from the first page to the last page to finish the whole process.

Due to the limitation of the available dataset, this dashboard will only focus on the second step, the registration funnel.

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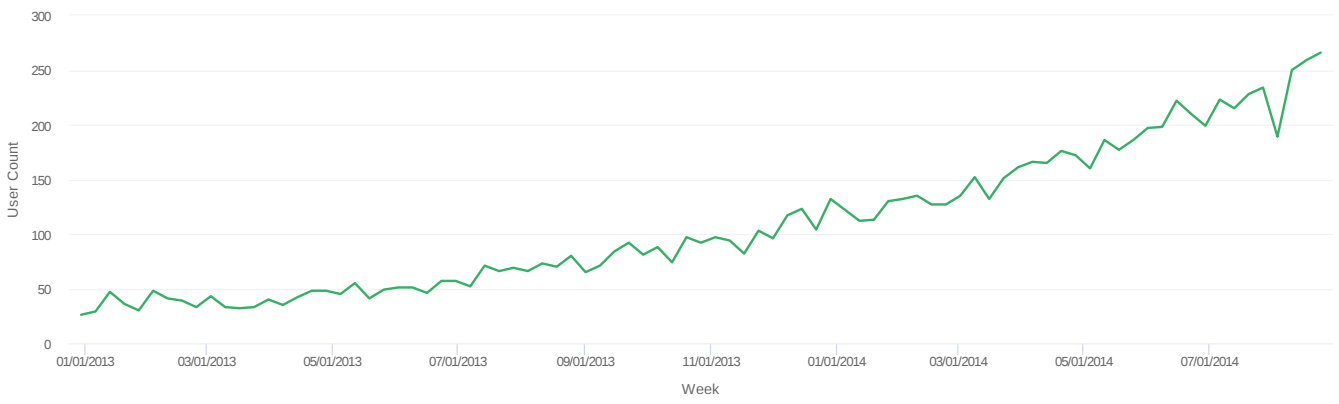
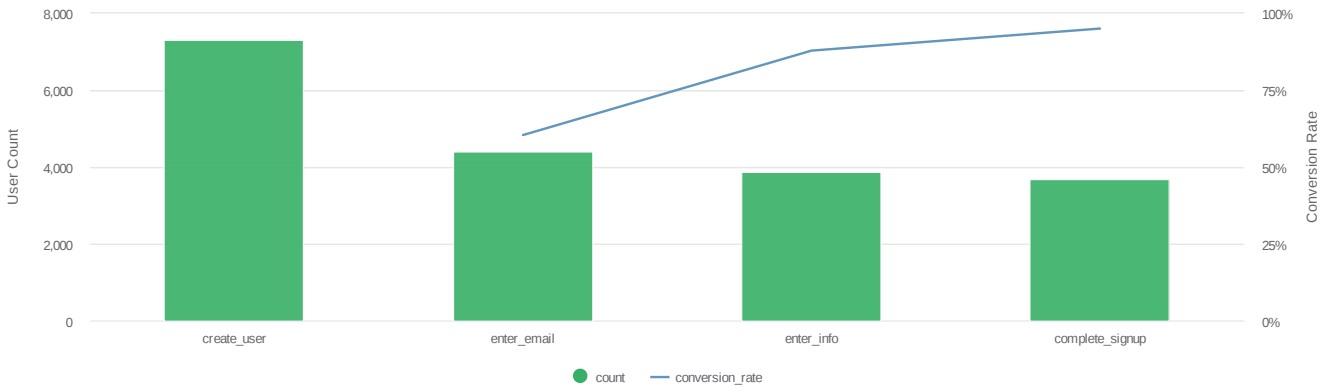
Weekly Added Activated Users Over Time



This shows accumulated activated users over time. An unexpected change will be easily figured out.

Overall Acquisition Funnel



This shows the overall registration funnel performance. The registration process includes four stages:

1. *Create user*
2. *Enter Email*
3. *Enter information*
4. *Activated and complete the signup*

Total users in each stage are counted, along with corresponding conversion rate.

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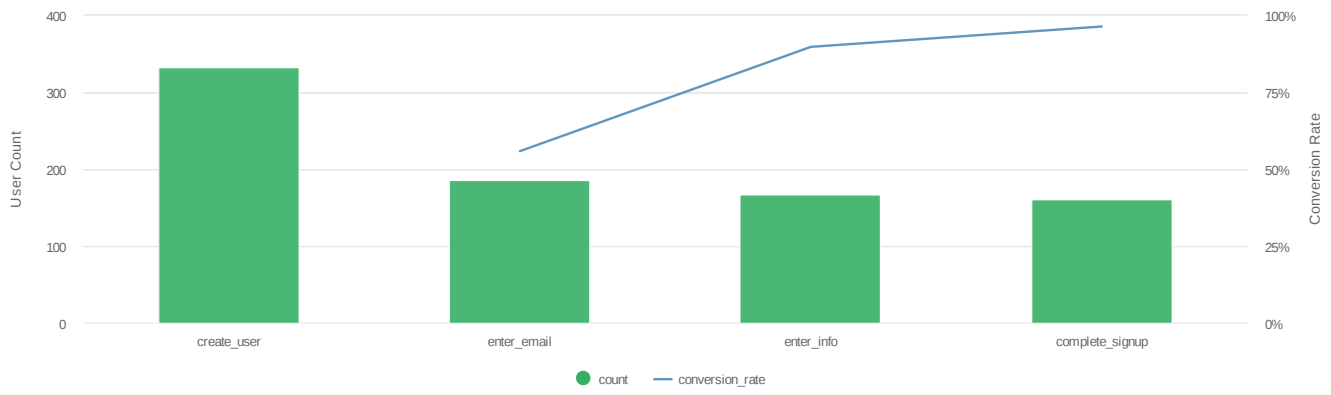
Acquisition Funnel of the Latest Week



This is the same funnel but the time frame is limited to the latest week, by which we can easily compare the conversion rate to the average and allocate bottlenecks if have.

User Retention

Yammer defines active (engaged) users as having made some type of server call by interacting with the product. According to this demo database, engagement activities include:

1. *Message related activities: like others' messages, send messages and view message inbox*
2. *Search related activities: run searches, run autocomplete searches and click search results*
3. *General activities: view home page, log into accounts*

In the real world, there must have other activities that should be considered as engagement, but for some reason, those are not contained in this demo database. As such I will stick to only the database has.

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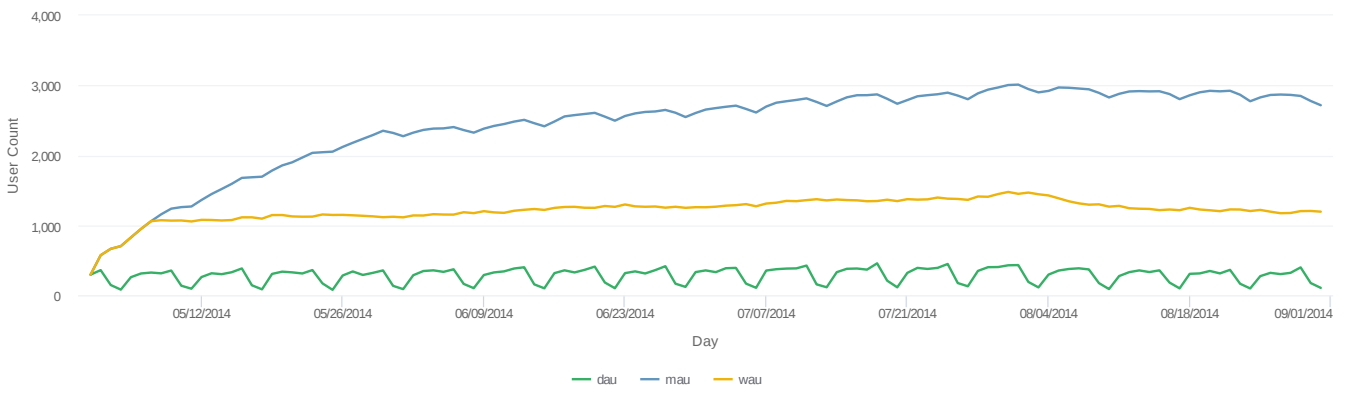
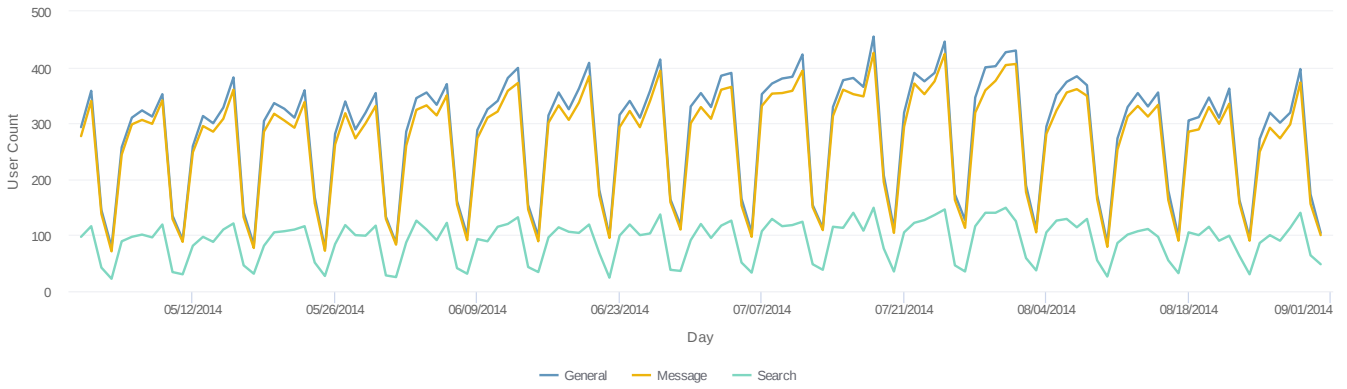
DAU, WAU and MAU



At Yammer, WAU is considered as the major metric to identify the performance of the engagement. As Yammer is mostly used by coworkers during their working time, if you take a look at DAU, you will find a periodic trend: increase during weekdays and decrease during weekends. Because of this, DAU is not an ideal major metric.

You may also notice that there is a decrease in WAU since the beginning of Aug 2014. It is also aligned with the data in the Key Metrics section at the top of the dashboard. You see, visualization is always a good tool to indicate trends.

Product Engagement by Segments



To understand the decrease in WAU, we may want to check the data by segments to understand the causes. In this chart, the data is segmented by different engagement activities. You can see the trend doesn't stick to a single segment. In general it is rare that all these things are broken down, so it is reasonable to guess there might have some things other than engagement activities.

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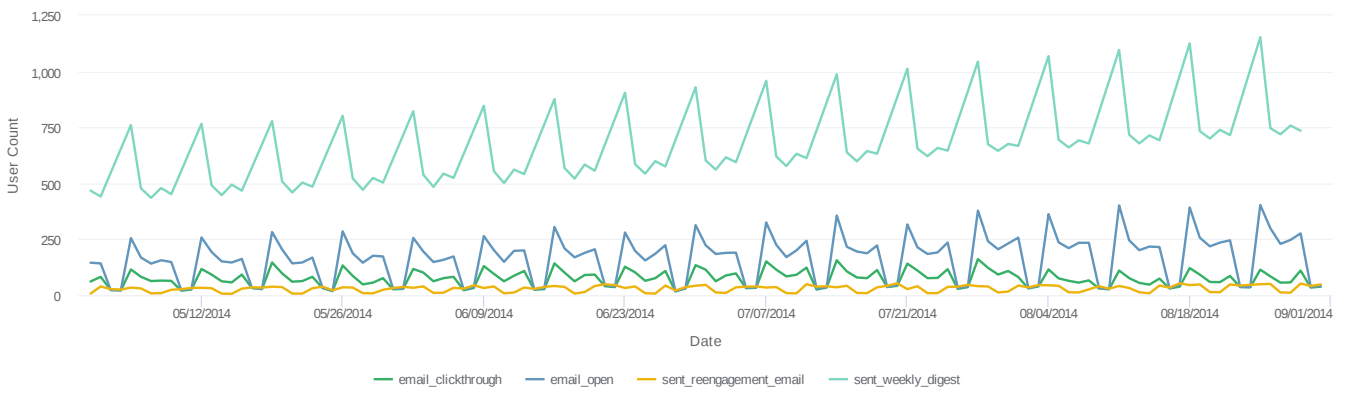
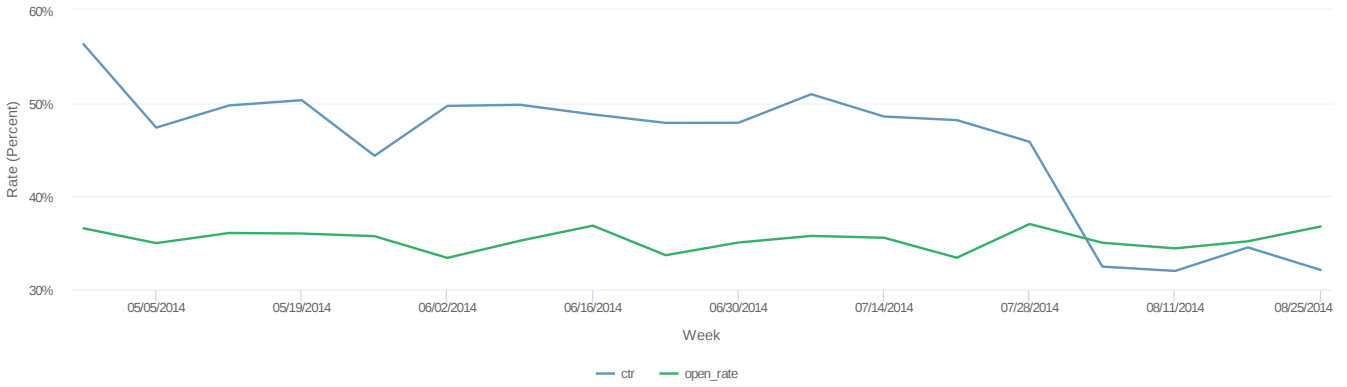
Email Engagement by Actions



The email campaign is a typical way to bring back users to our products and increase their engagement. In the real world, there might have other approaches like App notifications or SMS. In this demo database, only email campaigns are included.

Email campaign process is also like a funnel, going through from sending digest Emails, opening emails and click through and redirect to the products. You can see the first two stages don't decrease (actually increase a little bit). The third stage might decrease. Due to the unit scale, it is not easy to look carefully, so let's bring up another chart.

Email Open Rate and Clickthrough Rate



Open rate means among all users we've sent Emails, how much has opened it. Click-through rate(CTR) means among all users who have opened it, how much click and redirected to the product.

From this chart, we can easily find out that the CTR drops dramatically since week 2014/07/28. This is a good indicator to take a look at. It is highly possible that there is something wrong with click-through function. If it doesn't work as expected,

users can not be brought back to the product for engagement as it is designed. You see, visualization is a good way to identify the trends and make a quick analysis.