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**Mode Analytics**

**Yammer Case Study**

Yammer is a social network platform designed for companies who wish to encourage employees within an organization to connect and share content with ease. Three case studies are provided below.

1. **Drop in user engagement**
   1. Scope

On a Tuesday morning (September 2, 2014), the head of the Product team walks over to your desk and asks you what you think about the latest activity on the user engagement dashboards. You fire them up, and you observe a decline in user engagement over a period of 4 weeks.

Yammer defines engagement as having made some type of server call by interacting with the product (shown in the data as events of type “engagement”). Any point in this chart can be interpreted as “the number of users who logged at least one engagement event during the week starting on that date.”

You are responsible for determining what caused the latest dip and, if appropriate, recommending solutions for the problem.

* 1. Preparation

Before diving into the data, the following potential issues have been identified:

* + 1. Engagement type

There are many ways users can interact with Yammer. Looking at user’s engagement broken down by engagement type might reveal more information. This drop could be due to a function that does not work anymore thus workers are less active. After reviewing user’s engagement query which showed a dip, only login type of engagement is considered for weekly activity. Because a user has to login first before it can interact with Yammer, I don’t expect to see a difference with other type of engagement.

* + 1. Users group

Another reason could be that a group of users didn’t contribute this week. Perhaps there are on vacation (that would be a long vacation though! i.e. 4 weeks). Product manager may know about special events happening during recent weeks. At the same time, we can check for the number of new users and group users by company or seniority.

* + 1. Device type

Users can access their account using different devices. A drop might appear for a particular device due to an update in the UI that does not work well. We can look at engagement per device type.

* 1. Solving the case
     1. Engagement type:

See this [Link to Mode Analytics](https://modeanalytics.com/ceddie51/reports/33bced5c1d61). Login events outnumbers all other type of engagement since one needs to log in first.

* + 1. Users group:

Growth is globally up as shown on the following report ([growth](https://modeanalytics.com/ceddie51/reports/3344e07cc9c4)). This query looks at the number of new users created on a daily basis. Similarly, it also shows the number of new users who completed the activation process. Note that signups are low during weekends. There is a greater proportion of people who completed their activation during weekends too because they can take more time (no interruption from work). The number of new users is growing. Maybe old users are not engaged anymore.

User’s seniority is determined by the difference between its activation date and September 2nd, 2014. If one uses created date, it will include users who have never been active (no engagement) and it will add noise. I came up with two solutions ([Seniority\_solution\_1](https://modeanalytics.com/ceddie51/reports/aad462352fbd) and [Seniority\_solution\_2](https://modeanalytics.com/ceddie51/reports/5c275e20d503) ). It seems that they each ran in about 1s. I’m not sure which one will scale up more efficiently. Perhaps solution 2 where CASE statement is minimal.

The conclusion is older users are not as active as they used to.

* + 1. Device type:

Phone suffers the largest hit in terms of engagement followed by tablet as show on [Device type](https://modeanalytics.com/ceddie51/reports/c1c74e342a3e) report. It seems that there might be a technical issue with a recent application update for phones/tablets that prevent users to engage on yammer social network.

* + 1. Email digest:

There is a clear drop in click through which indicates a lack of interest in older users([Emails\_communication](https://modeanalytics.com/ceddie51/reports/dc3109c7de56) or [Emails\_ReportFormat](https://modeanalytics.com/ceddie51/reports/4f13b6109935) for report formatted table). This is another element to mention to the Product Manager.

* 1. Conclusion

Long time users (more than 10 weeks) who use their phone/tablets are identified as a significant factor in the observed drop in engagement. Number of click through is down too.