

Diagnostic Analysis: Investigating Yammer Drop Engagement

By : Raden Bimo



Presentation Outline



Data Explanation

Source

The data was gathered from an analytic platform mode.com. The data was a case study of Yammer's drop in user engagement from May to August of 2014.

About Yammer

Yammer is a **social network** for communicating with co-workers. Individuals share documents, updates, and ideas by posting them in groups. Yammer is **free to use indefinitely**, but **companies must pay license fees** if they want **access** to administrative controls, including integration with user management systems like Active Directory.

Constraints

1. The only data set available to manipulate :
 - Time
 - Region
 - Platforms
 - Event tracking
2. This is **not real** data, we can't compare to any external data source.

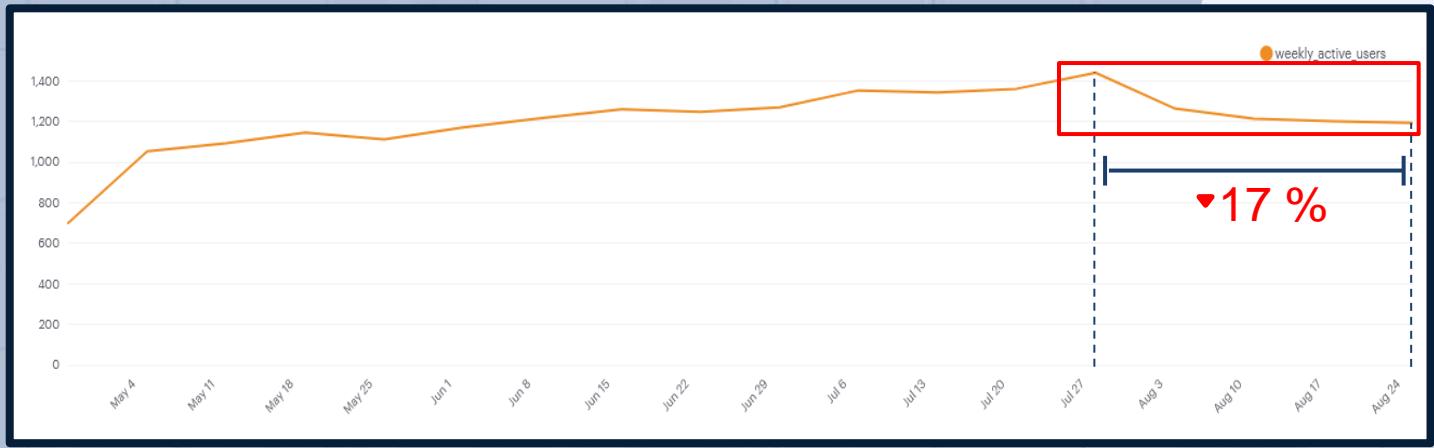
Disclaimer

The data used is **not real** and **did not** reflect real user engagement of the Yammer app at the time.

Problem & Objective Definition

Problem

There was a drop in engagement yammer users from **1442 users** on **July 28** to **1194 users** on **August 25**. There was a total **17% drop** in users since **July 28**, but Yammer didn't know why.



The above chart shows the number of engaged users each week. Any point in this chart can be interpreted as the number of users who logged at least once a week.

Objective

The goal of this analysis is to **identify the reasons** why the drop happened and **recommend** what action to take to prevent further loss.

Potential Causes

To determine the cause, I conduct business analysis from 4 main category.



Time

- The drop in engagement sudden or gradual?
- Is it a one time occurrence or a recurring issue?
- Do we see specific times during the day or specific days of the week where the drop is more pronounced?



Region

- Do we see the drop in engagement tied to a particular region or is it globally distributed?
- Have there been any recent changes in internet censorship laws related to the region with drops in engagement? Or national weekday?



Platform

- Do we see the drop occurred across specific platforms?
- Is the drop occurred on specific Operating System ?



Feature

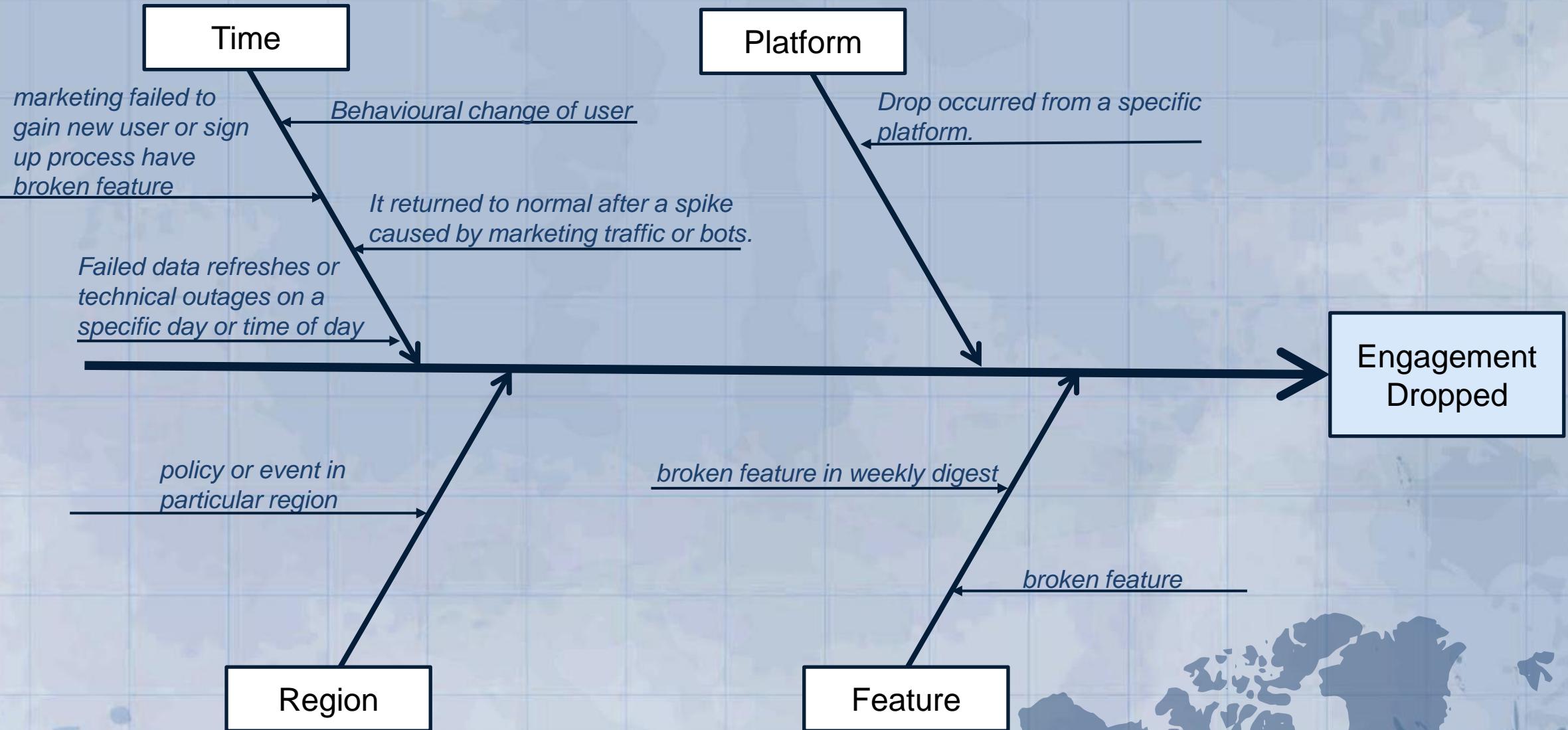
- Have there been any recent changes to application?
- Do we see the drop rate on specific feature?

Data Analysis

I use a Fish Bone diagram to help me construct the possible cause for hypothesis and then verify them.



Fish Bone Diagram

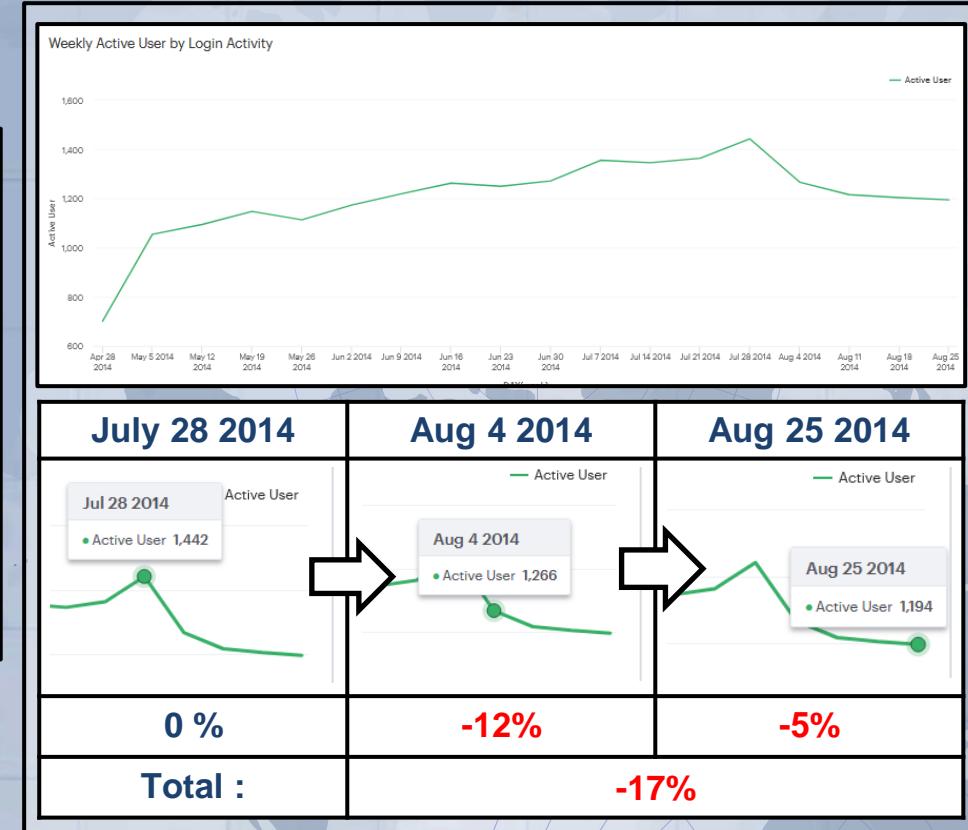
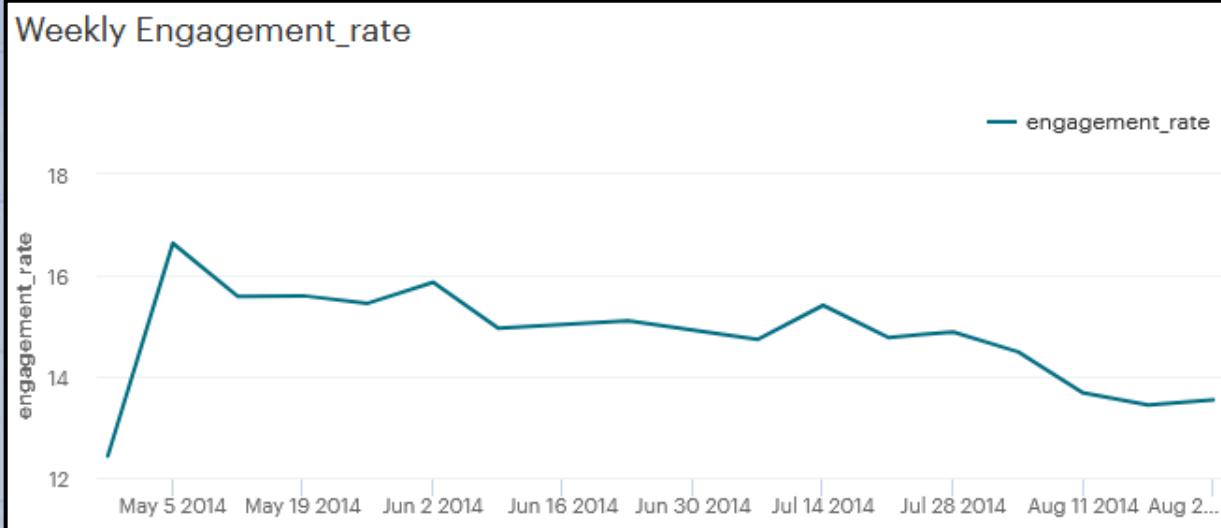




Time

Hypothesis: engagement dropped due behavioural change of user

Not Root Cause



Insight

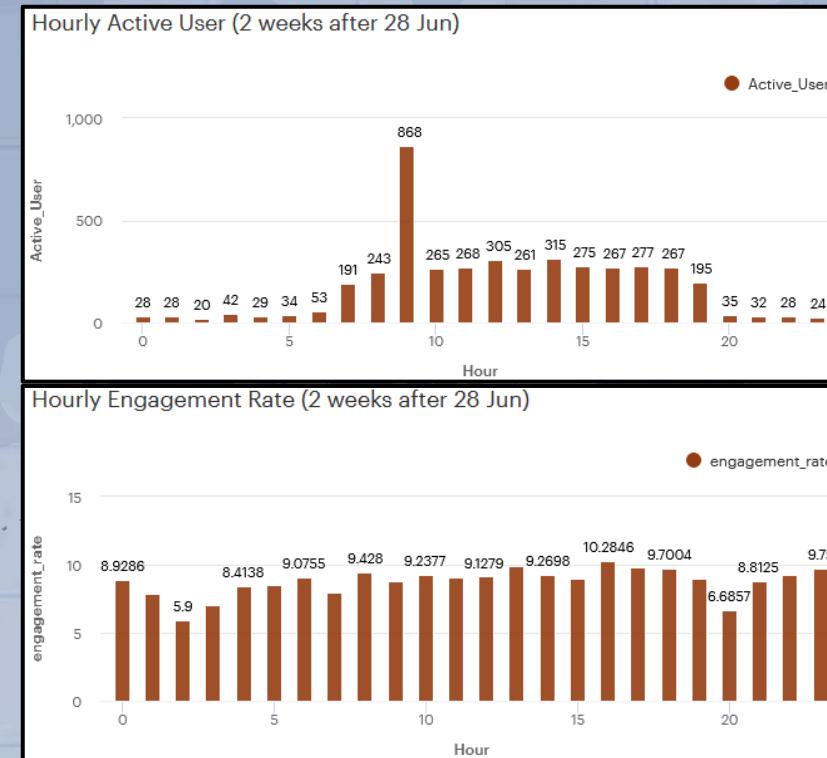
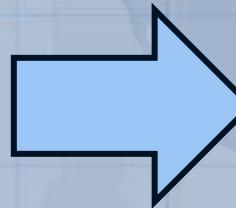
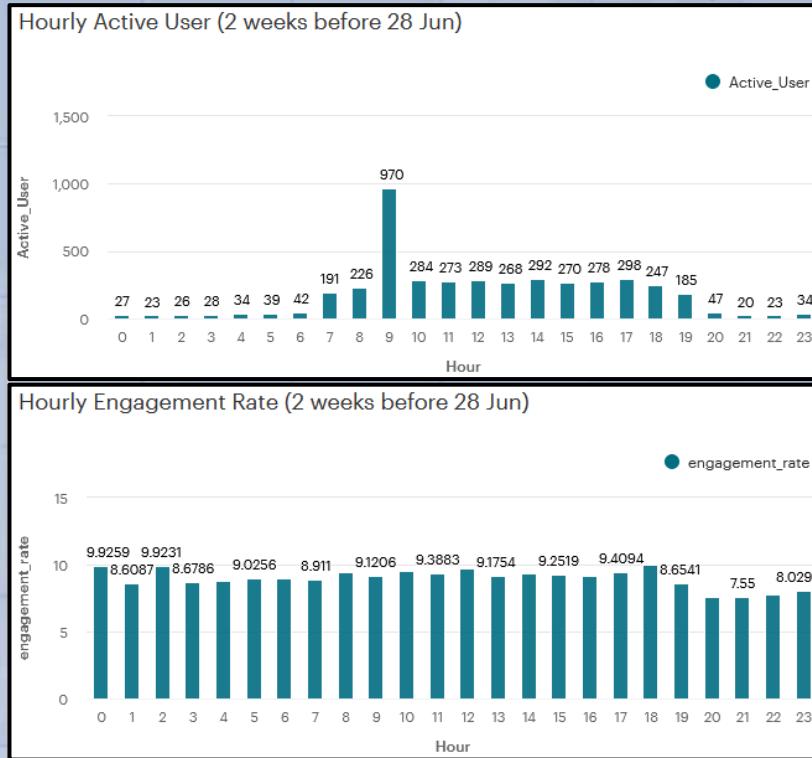
- The drop occurred suddenly. Most users who drop are within one-week timeframe, with a total of -12%. After that, the decline continued at -5% for 2 weeks.
- There is indication of a slightly downtrend due to the behavioural change of users from 5 May- 14 July. However, the sudden drop indicated that the drop was caused by some kind of event, law change in certain regions, feature failure, news, or other event that triggered the sudden drop after July 28.

Not Root Cause



Time

Hypothesis: engagement dropped due to failed data refreshes or technical outages on a specific time of day



Insight

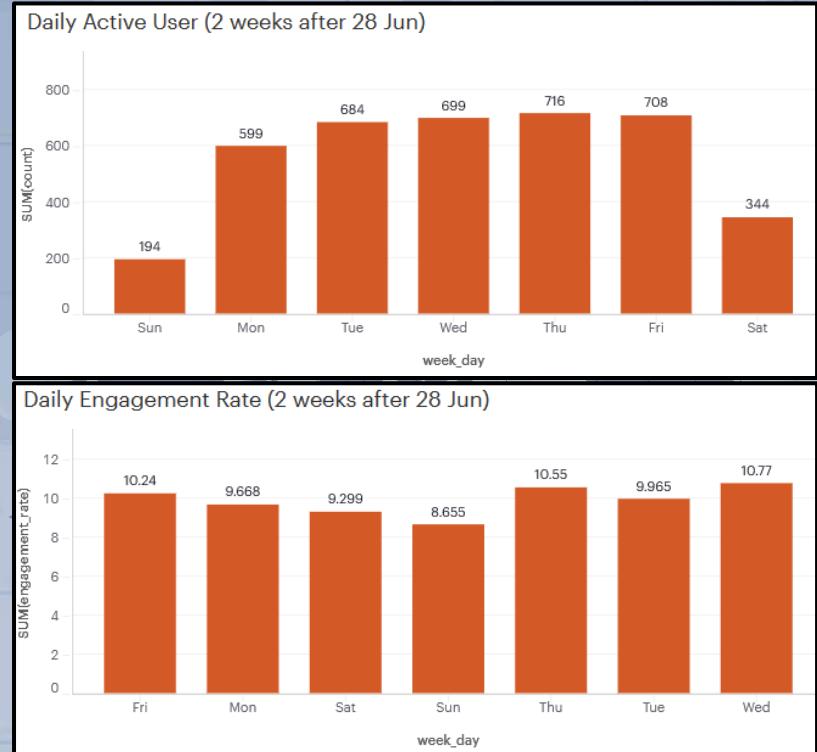
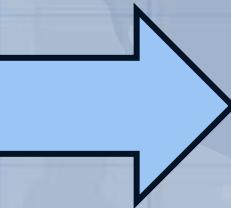
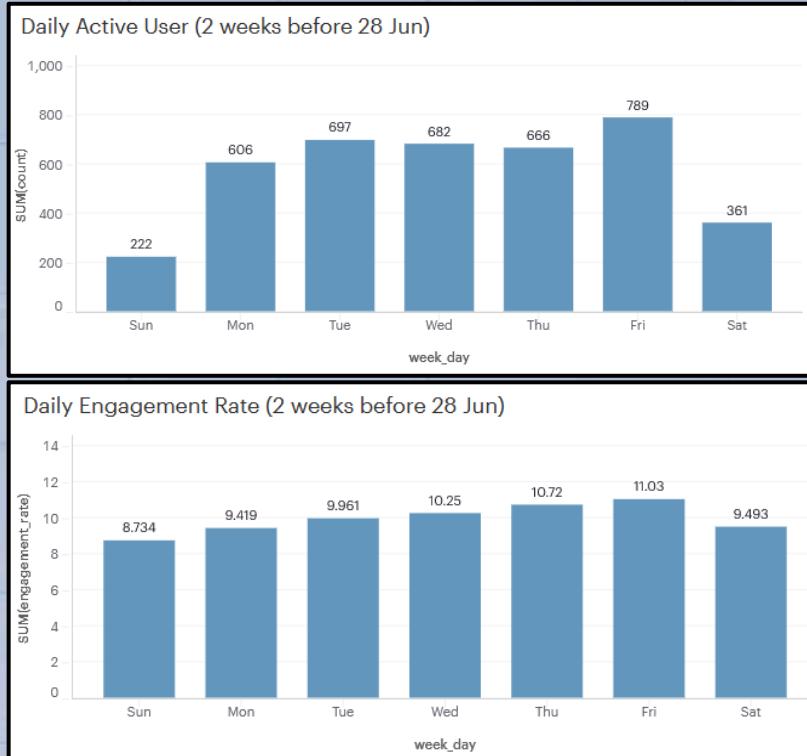
- Users interact with Yammer the most frequent around 9 a.m., but no other time of day stands out. Which makes sense given since Yammer is mostly used in work hours.
- There is a drop in engagement rate at 2 a.m. and 8 p.m., but only 18 active users have lost, implying that **the server is functioning properly at that time and is not the outcome of a blackout or failed data refreshes**, but instead that some users who are usually active users of the app are no longer active.

Not Root Cause



Time

Hypothesis: engagement dropped due to failed data refreshes or technical outages on a specific day



Insight

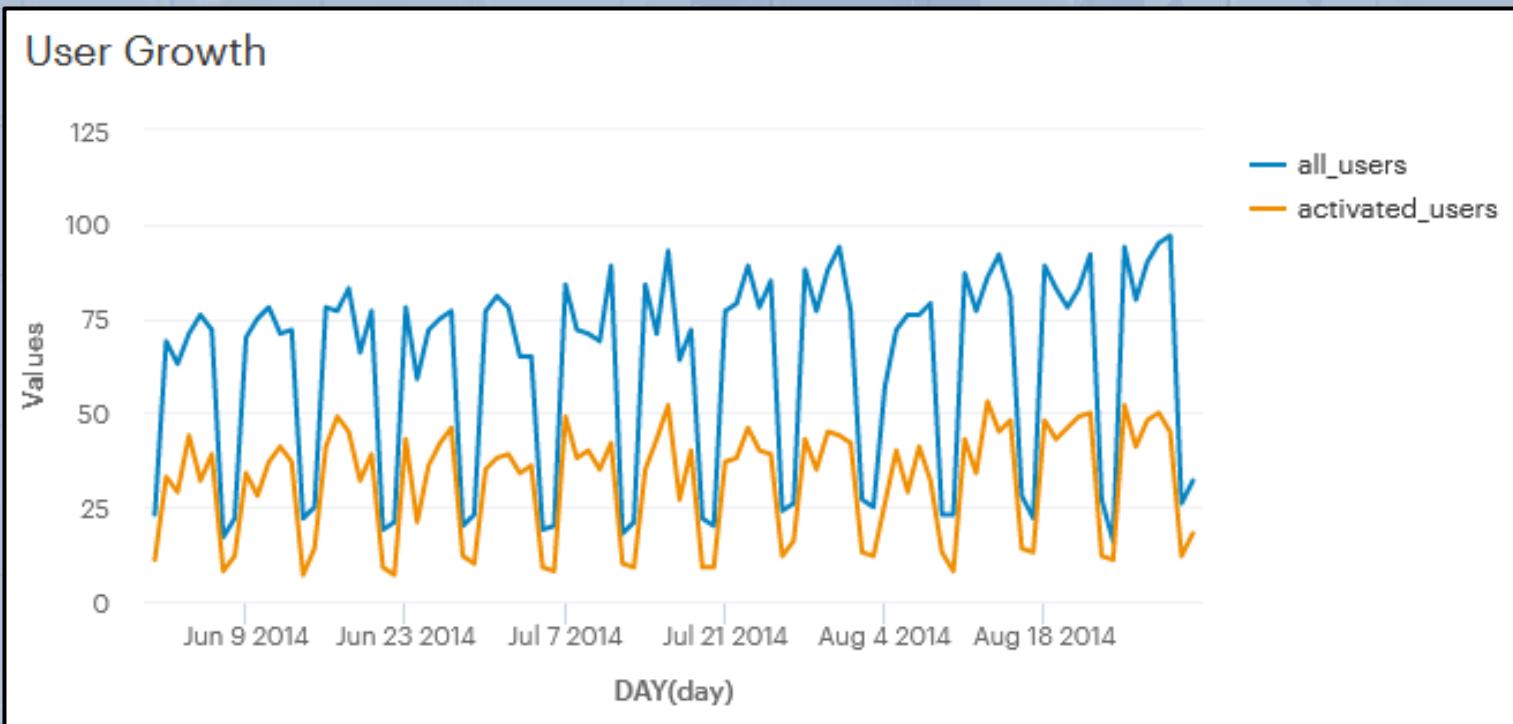
- Saturdays and Sundays have the lowest active users, which makes sense since Yammer is used mostly for work.
- The decrease of active users is distributed around the days, and there is a noticeable decrease on Friday, but the drop is not significant nor becomes 0. It means **the server is working properly and not caused by blackouts or failed data refreshes**. However, this indicates the drop caused by users who have some kind of behaviour, device type or certain region



Time

Hypothesis: engagement dropped due to marketing failed to gain new user or sign up process have broken feature

Not Root Cause



Insight

- Saturdays and Sundays have the lowest growth, which makes sense since Yammer is used mostly for work.
- The growth and activation rates are normal. There are new users every week, indicating that **the drop in engagement was not due to a failure of marketing to gain new users or a broken feature in the sign up process.**

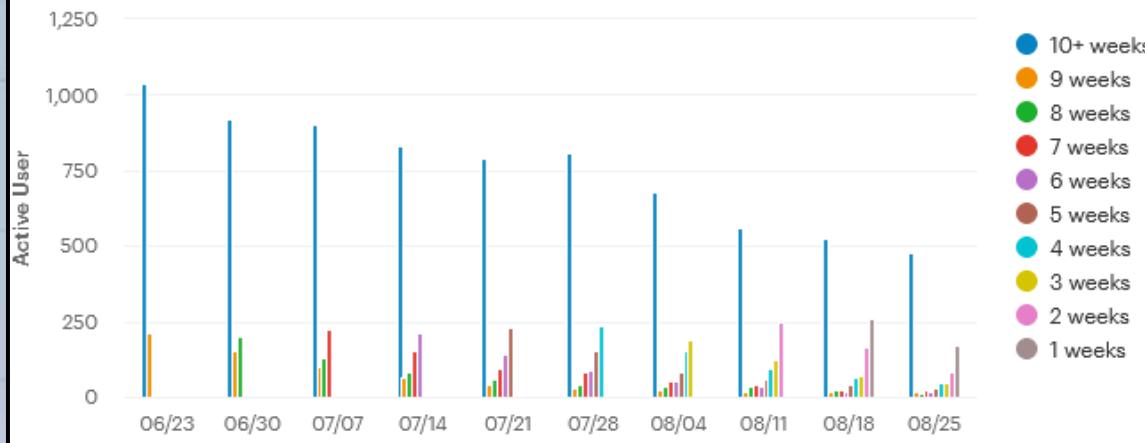
Not Root Cause



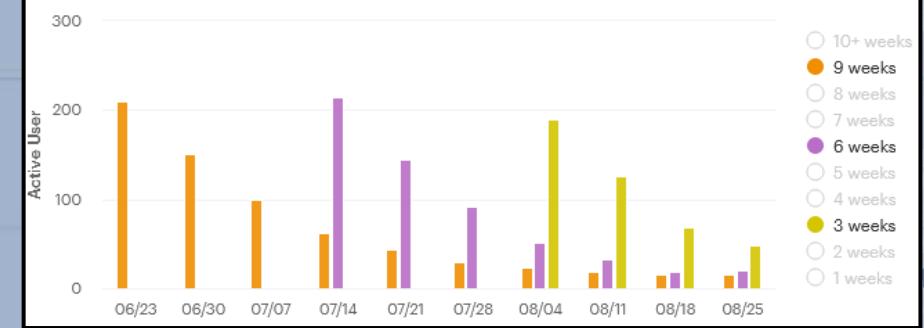
Time

Hypothesis: engagement dropped as a result of returned to normal after a spike caused by marketing traffic or bots.

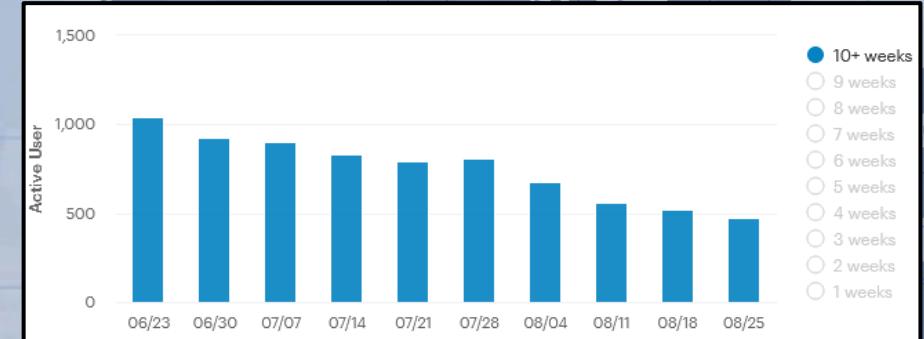
Retention Rate by Age Cohort



New users



Old users



Insight

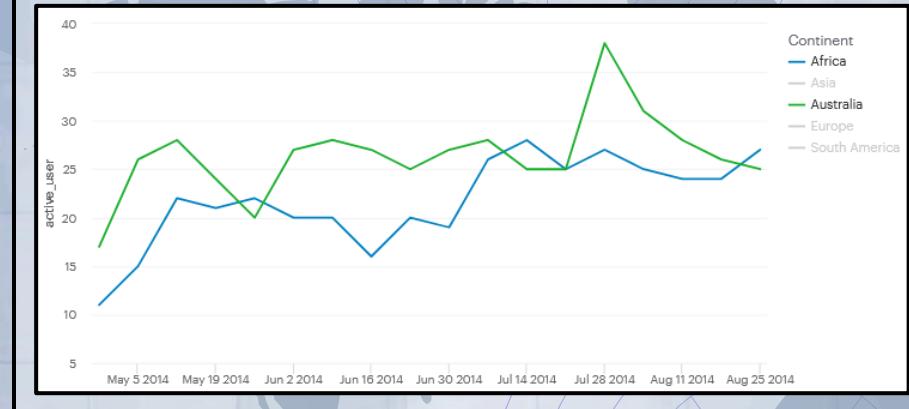
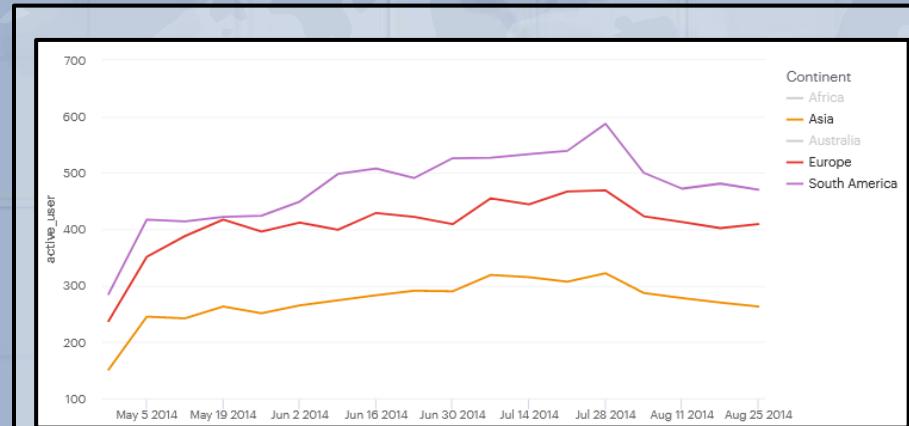
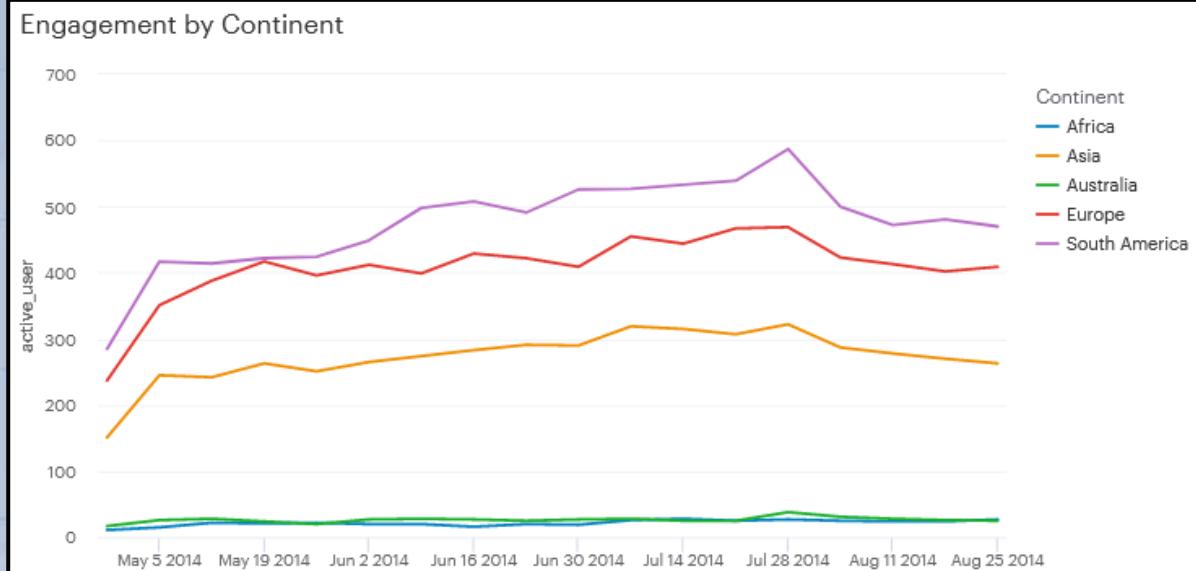
- Older Users shows decreasing trendline even before 28 July, while with only a 6-week timeframe, new users decreased over time, leaving only 10-18%. It seems yammer lack retention to retain its user.
- After segmenting the users by age, there is no spike from new users before 28 July and the problem coming from older users, indicating **the engagement not dropped as a result of returned to normal after a spike caused by marketing traffic or bots**.



Region

Hypothesis: engagement dropped due to policy or event in particular region

Not Root Cause



Insight

- The South America has the most active users, followed by Europe, Asia.
- The drop in engagement occurred globally, implying that **it was not caused by a policy or event in a particular region**.

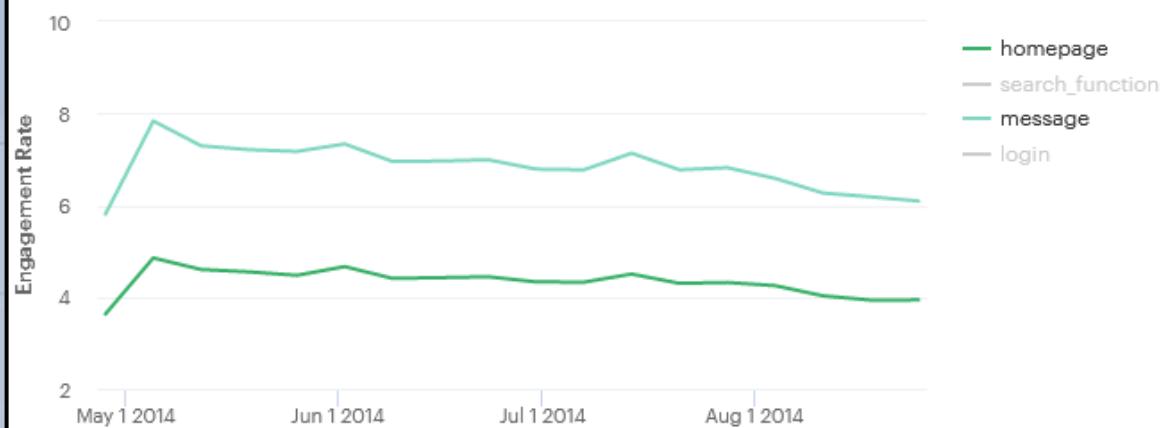
Root Cause



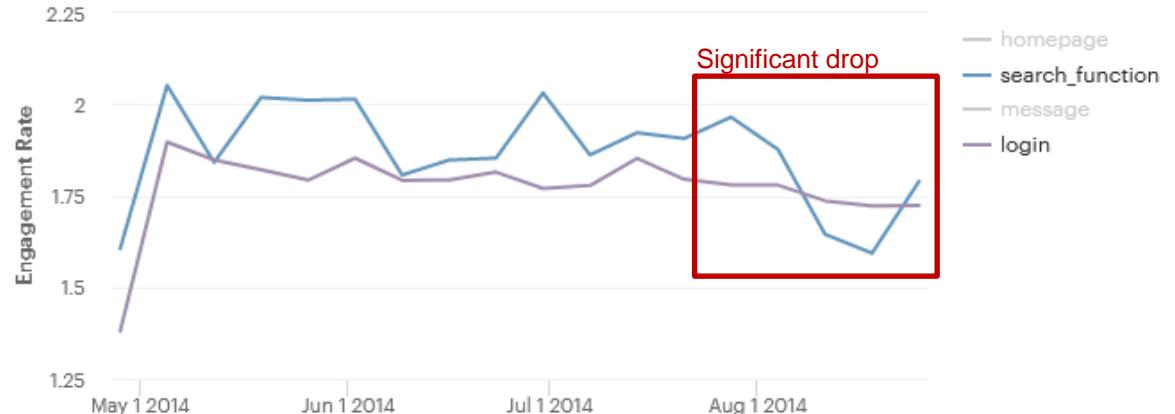
Feature

Hypothesis: engagement dropped due broken feature

Monthly Feature Usage



Monthly Feature Usage

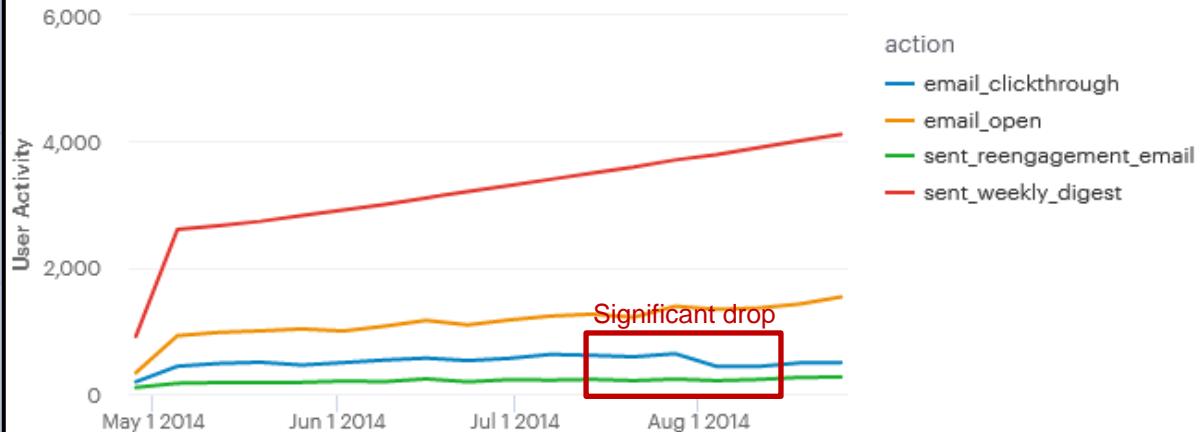


Insight

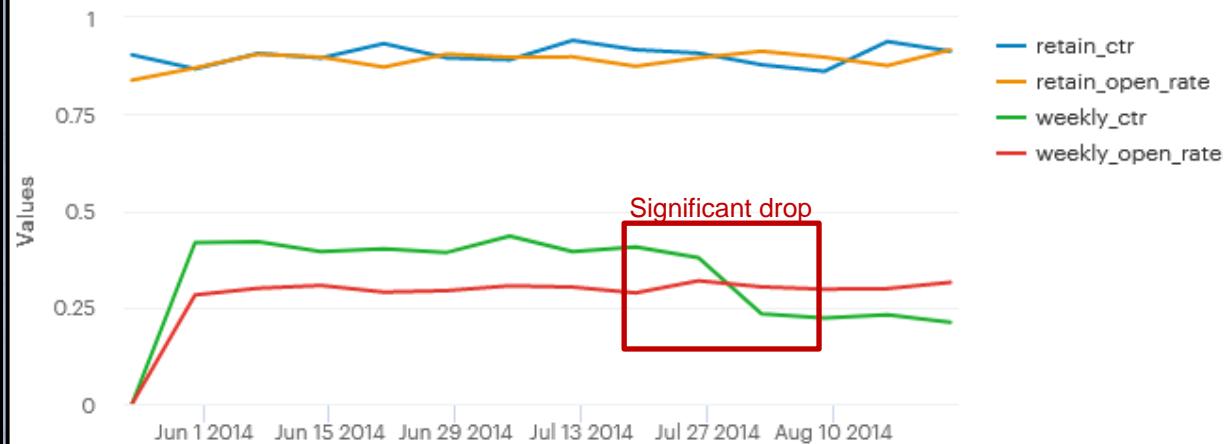
- The home page and message have a down trend value and are further affected by the sudden drop, indicating that the reason for the down trend is that the Yammer homepage and message feature are less used, but this is not the reason for the sudden drop.
- The Login feature has a slight decrease from users who usually login more than once a week to less than once a week. This occurred because of the side effect of the main cause but not the cause of the drop.
- The fact that the search function on the Yammer app experienced a significant drop after July 28 shows that there is a potential that something is wrong with the search function.

Feature Hypothesis: engagement dropped due broke feature in weekly digest

Weekly Digest Email Function CTR



Open and Rates for CTR and Re-engagement Email



Insight

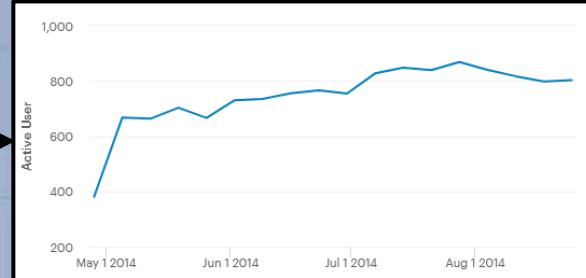
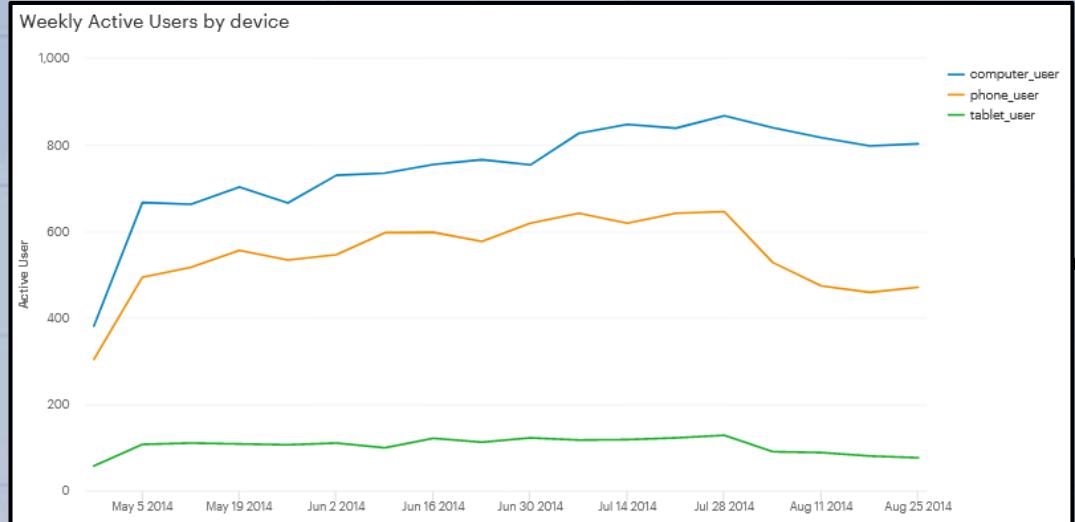
- Email open, re-engagement email and sent weekly digest email has a normal performance.
- A sudden decrease in click through rates even though open rates are increasing could mean most users open email and do not click the link in the email. Therefore, the possibilities are that the **weekly digest email is not relevant enough or that several users can't click the link in the email**.



Platform

Hypothesis: *Drop in engagement occurs from specific platform*

Root Cause



Computer User



Phone User



Tablet User



Insight

- There is a slight decrease in computer users. This is caused by the effect of the sudden drop, but it is not the main cause of the sudden drop.
- The huge drop occurred from table and phone users, indicating that **the sudden drop originated from phone and tablet users**.

Root Cause



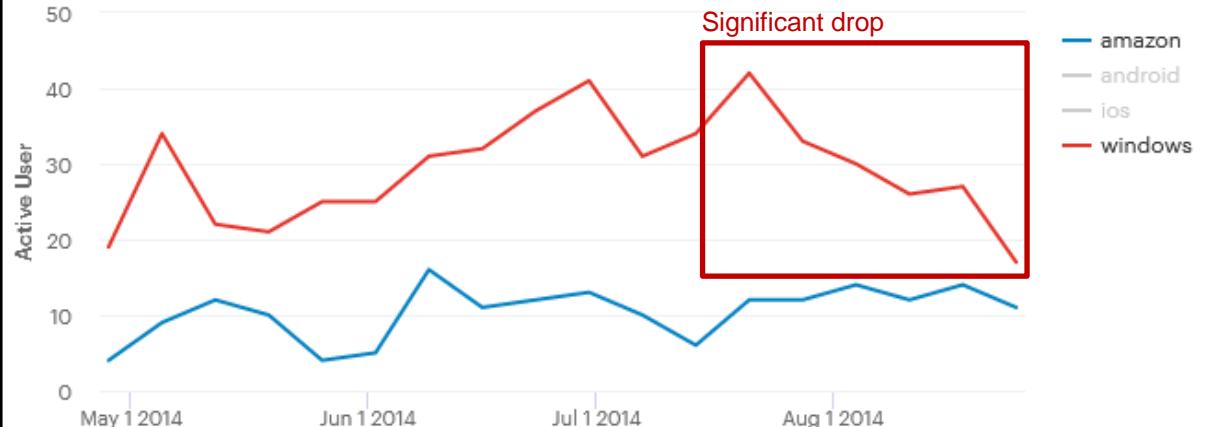
Platform

Hypothesis: *Drop in engagement occurs from mobile phone users that use a particular operating system*

Active Phone User by OS



Active Phone User by OS



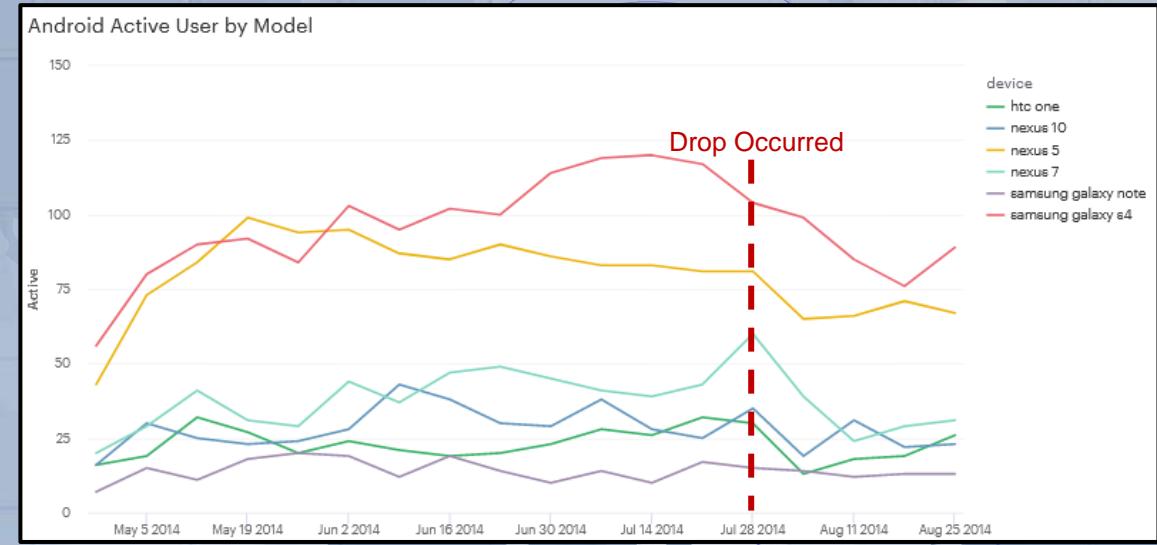
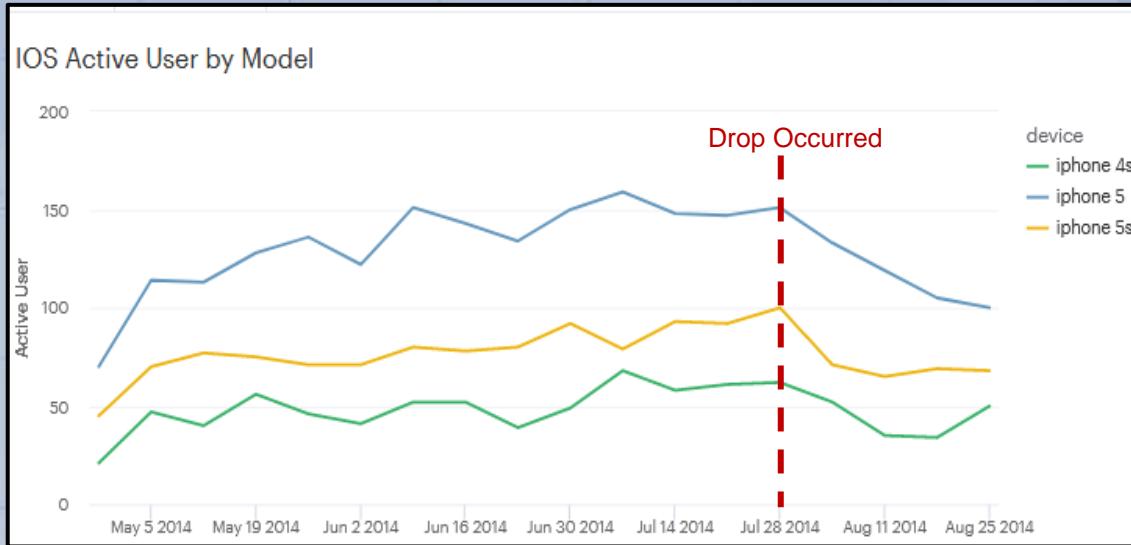
Insight

- Amazon not effected by the current problem.
- After July 28, Android, Amazon, and IOS all had a significant drop. This was the same week that a sudden drop happened. Therefore, **Android, Amazon, and IOS are the operating systems from which the problem originates.**



Platform

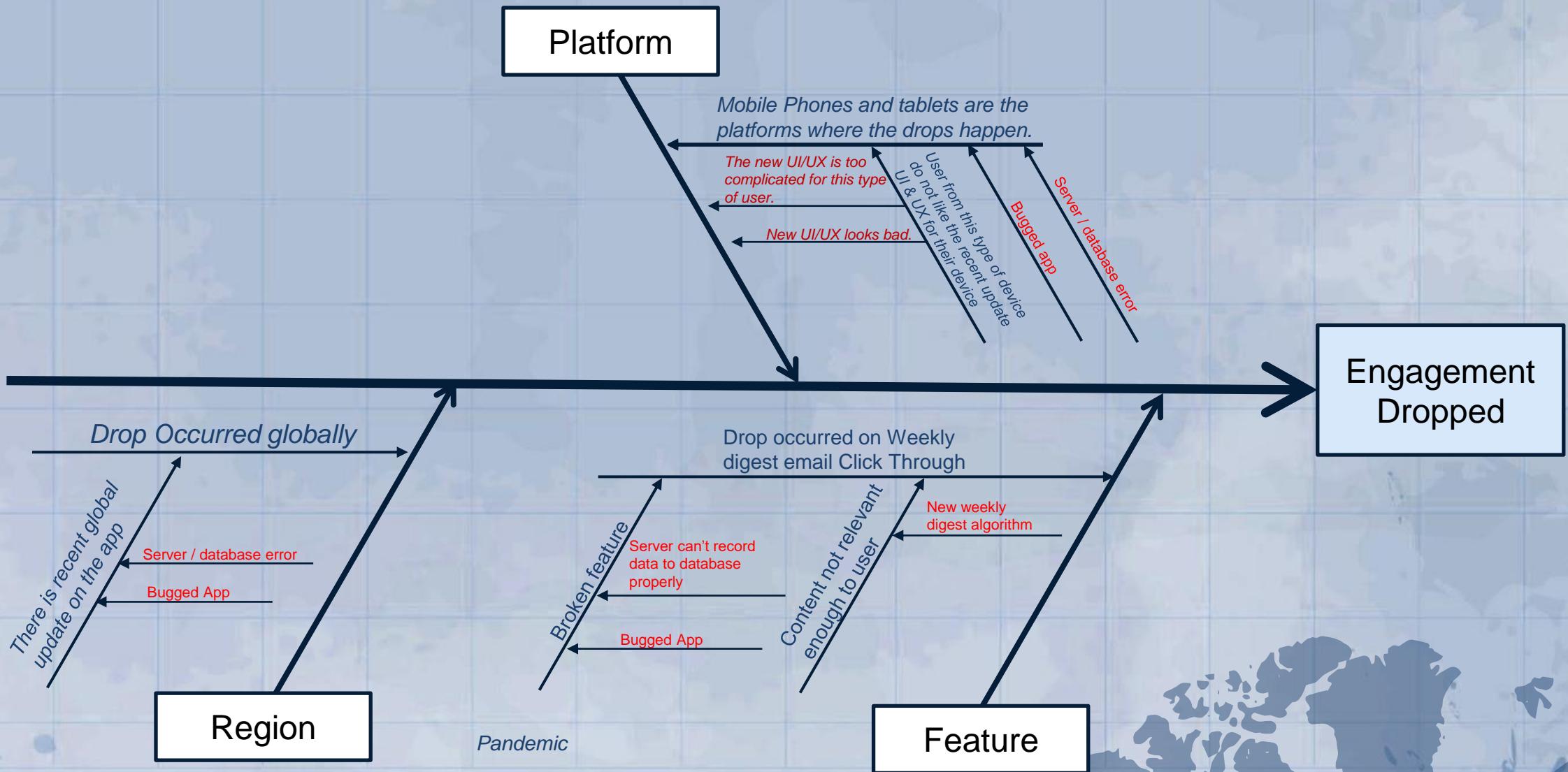
Hypothesis: *Drop in engagement occurs from IOS, Android, and Windows mobile phone users use a particular model*



Insight

- All models with Android and IOS operating systems have been dropped after July 28.
- The only model for Windows is the 'Nokia Lumia 635', which has been shown in the "Active Phone Users by OS" shows a drop after July 28.
- From the above information, it appears that the drop in engagement originates from all models with Android, IOS, and Windows mobile phone users.

Fish Bone Diagram



Conclusion

Possible Reason

Based on my analysis, I discovered two issues that could be the reason why the drops happen :

1. There is a high possibility **the link inside the weekly digest from tablet and mobile phone users is not working properly.**
2. Besides from the weekly digest, **the search feature for mobile phone and tablet users also shows indications of malfunction.**

Because above reasons, users who use mobile phones and tablets don't want to log in to the app.

Recommendation

I suggest immediately asking the engineering team if there are any recent updates to the app and then validate the search feature and weekly digest are working and recording activity properly to the database. However, if there is nothing wrong with the app, there are possibilities :

1. The new weekly digest email algorithm is **not relevant enough to tablet and mobile phone users.**
2. The new search function algorithm does **not show what phone and tablet users want to find** or they **don't like the latest UI/UX for search function.**

Immediately Discuss with other departments such as engineering, design, marketing, and product manager on validation strategies. Some validation strategies to take include AB testing, feature rollbacks, and conducting a user survey.

Thank You!

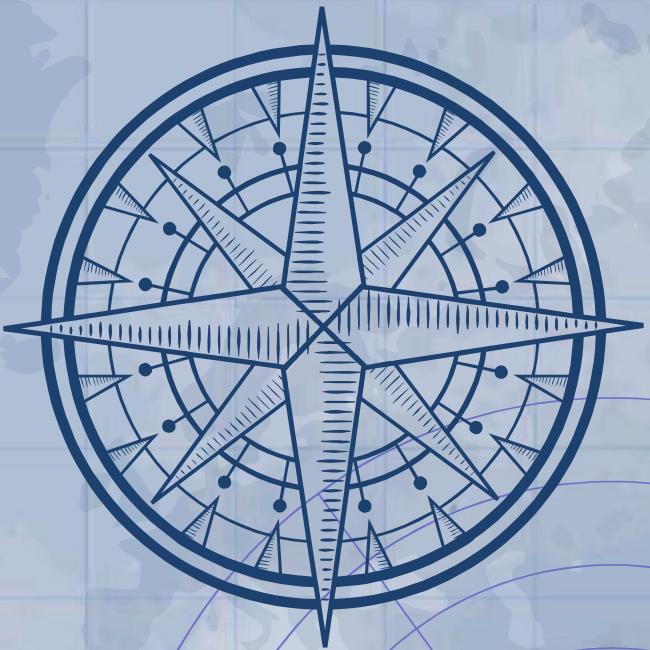
Do You have any questions?
You can contact me with :



<https://linkedin.com/in/radenbimo/>

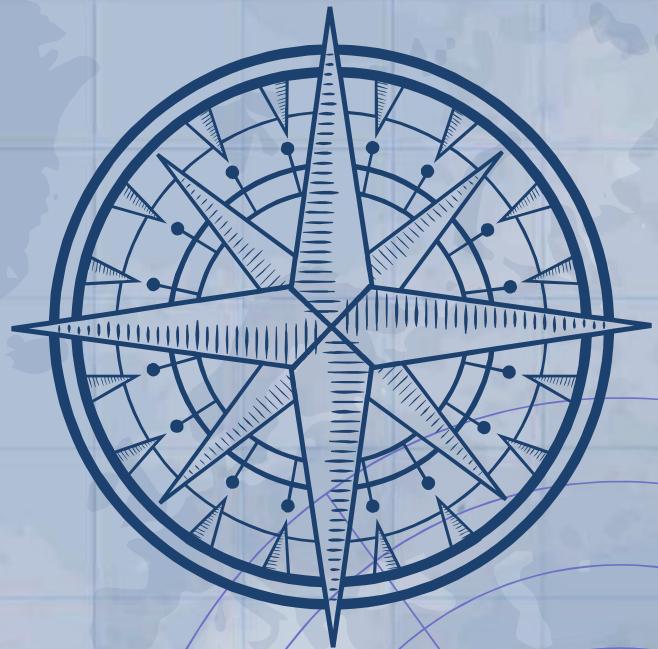


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Appendix

List of my query, website, ppt theme and other stuff that I used to build this project



Websites

- **Study Case Website**

<https://mode.com/sql-tutorial/a-drop-in-user-engagement/>

- **PPT Theme and Art**

<https://storyset.com>

<https://slidesgo.com/theme/social-studies-subject-for-middle-school-8th-grade-geography-and-colonialism#search-social+studies+project&nextSearchExpression-social+studies&position-1&results-135>

- **Fish Bone Diagram Literature**

<https://eriskusnadi.com/2011/12/24/fishbone-diagram-dan-langkah-langkah-pembuatannya/>

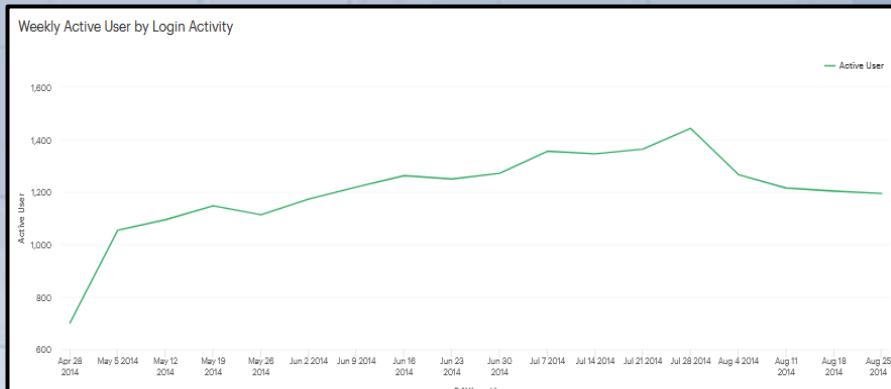
- **KPI Metrics on App Literature**

<https://www.appsflyer.com/resources/guides/app-engagement-user-retention/>

<https://uxcam.com/blog/top-50-mobile-app-kpis/>

Query

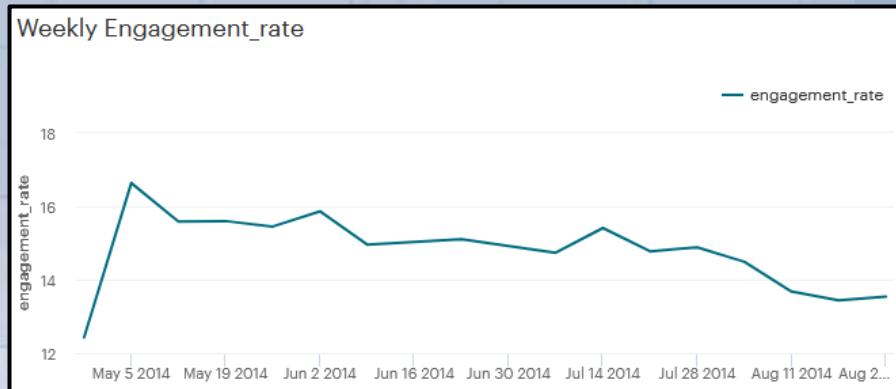
Weekly Active User



```
1 SELECT DATE_TRUNC('week',occurred_at) AS Week,
2      COUNT(DISTINCT CASE WHEN event_name = 'login' THEN user_id ELSE NULL END ) AS "Active User"
3 FROM tutorial.yammer_events
4 WHERE event_type = 'engagement'
5 AND occurred_at BETWEEN '2014-05-01' AND '2014-09-01'
6 GROUP BY 1
```

Query

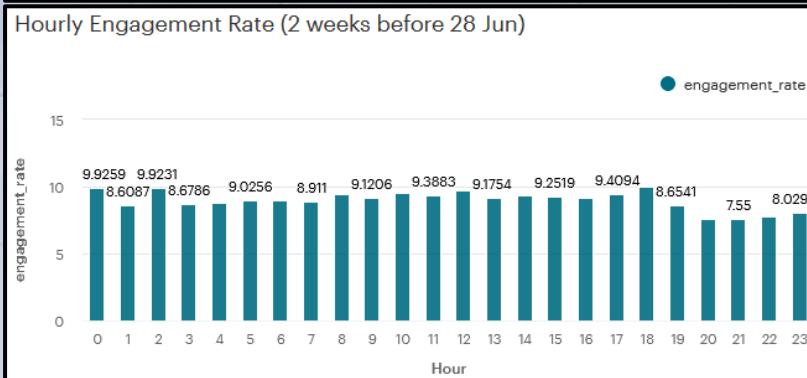
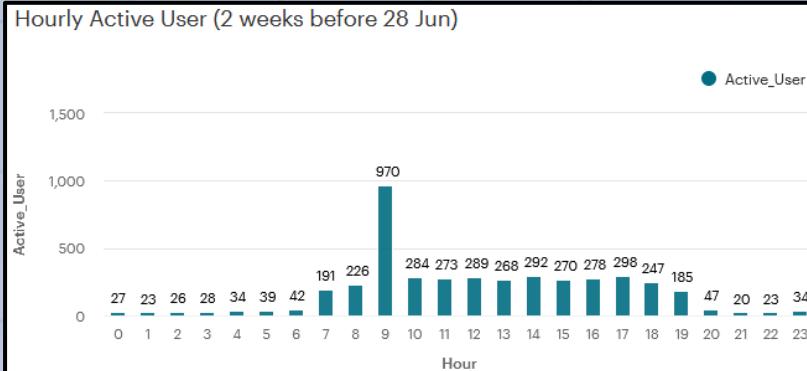
Weekly Engagement Rate



```
1 SELECT DATE_TRUNC('week', occurred_at) as week,
2      ((CAST(COUNT(*) as FLOAT)/ CAST(COUNT(DISTINCT user_id) as FLOAT))) as engagement_rate
3 FROM tutorial.yammer_events
4 WHERE event_type='engagement'
5 AND occurred_at >= '2014-05-01'
6 GROUP by 1
7 ORDER by 1
```

Query

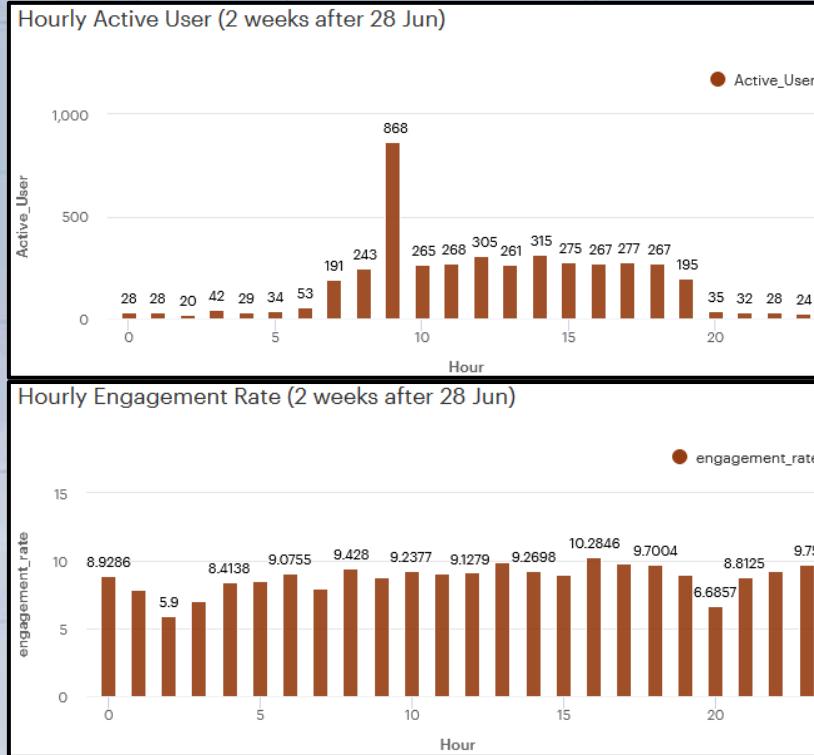
Hourly Active User and Engagement Rate (2 Weeks after 28 Jun)



```
1 | SELECT DATE_PART('hour',DATE_TRUNC('hour',occurred_at)) AS "Hour",
2 |           COUNT(distinct user_id) AS "Active_User",
3 |           CAST(COUNT(user_id)AS FLOAT)/CAST(COUNT(distinct user_id)as FLOAT) engagement_rate
4 | FROM tutorial.yammer_events
5 | WHERE occurred_at BETWEEN ('2014-07-27'::TIMESTAMP - INTERVAL '2 week') AND '2014-07-27'
6 | AND event_type = 'engagement'
7 | GROUP BY 1
8 | ORDER BY 1
```

Query

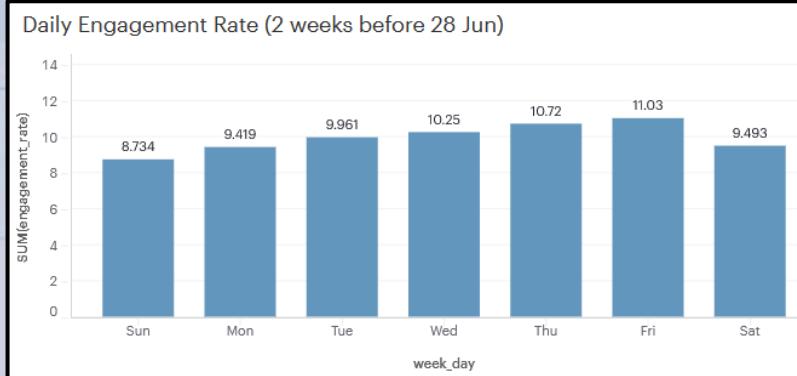
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2     COUNT(distinct user_id) AS "Active_User",
3     CAST(COUNT(user_id)AS FLOAT)/CAST(COUNT(distinct user_id)as FLOAT) engagement_rate
4 FROM tutorial.yammer_events
5 WHERE occurred_at BETWEEN '2014-07-28' AND('2014-07-28'::TIMESTAMP + INTERVAL '2 week')
6 AND event_type = 'engagement'
7 GROUP BY 1
8 ORDER BY 1
```

Query

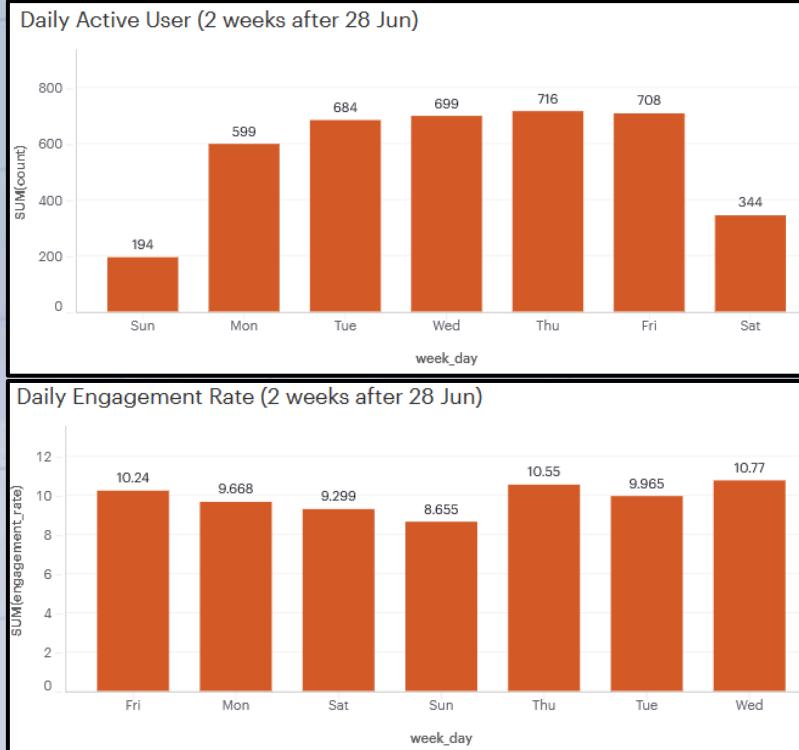
Daily Active User and Engagement Rate (2 weeks before 28 Jun)



```
1 Select EXTRACT('DOW' FROM occurred_at) week_day,
2 CASE WHEN EXTRACT('DOW' FROM occurred_at) = '0' THEN 'Sun'
3 WHEN EXTRACT('DOW' FROM occurred_at) = '1' THEN 'Mon'
4 WHEN EXTRACT('DOW' FROM occurred_at) = '2' THEN 'Tue'
5 WHEN EXTRACT('DOW' FROM occurred_at) = '3' THEN 'Wed'
6 WHEN EXTRACT('DOW' FROM occurred_at) = '4' THEN 'Thu'
7 WHEN EXTRACT('DOW' FROM occurred_at) = '5' THEN 'Fri'
8 WHEN EXTRACT('DOW' FROM occurred_at) = '6' THEN 'Sat'
9 END as week_day,
10 (CAST(COUNT(user_id) as FLOAT) / CAST(COUNT(DISTINCT user_id) as FLOAT)) as engagement_rate
11 ,count(DISTINCT user_id)
12 FROM tutorial.yammer_events
13 WHERE event_type = 'engagement'
14 AND occurred_at BETWEEN ('2014-07-27'::TIMESTAMP - INTERVAL '2 week') AND '2014-07-27'
15 GROUP BY 1
16 ORDER BY 1
```

Query

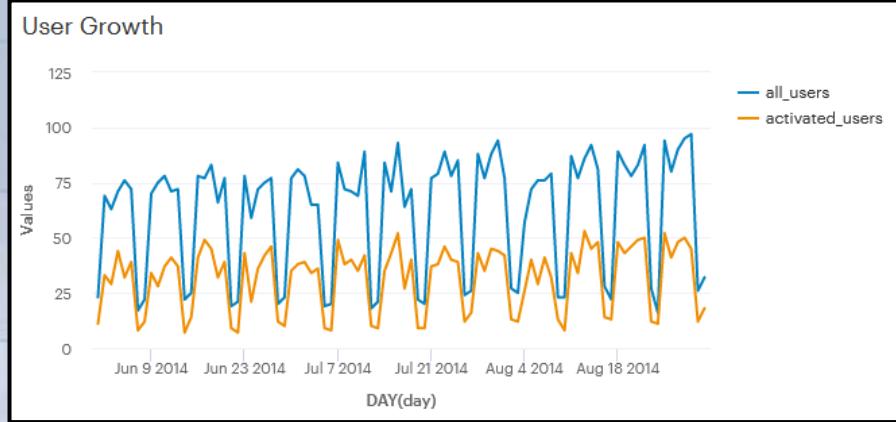
Daily Active User and Engagement Rate (2 weeks after 28 Jun)



```
1 | Select EXTRACT('DOW' FROM occurred_at) week_day,
2 | CASE WHEN EXTRACT('DOW' FROM occurred_at) = '0' THEN 'Sun'
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7 | WHEN EXTRACT('DOW' FROM occurred_at) = '5' THEN 'Fri'
8 | WHEN EXTRACT('DOW' FROM occurred_at) = '6' THEN 'Sat'
9 | END as week_day,
10 | (CAST(COUNT(user_id) as FLOAT) / CAST(COUNT(DISTINCT user_id) as FLOAT)) as engagement_rate
11 | ,count(DISTINCT user_id)
12 | FROM tutorial.yammer_events
13 | WHERE event_type = 'engagement'
14 | AND occurred_at BETWEEN '2014-07-28' AND('2014-07-28'::TIMESTAMP + INTERVAL '2 week')
15 | GROUP BY 1
16 | ORDER BY 1
```

Query

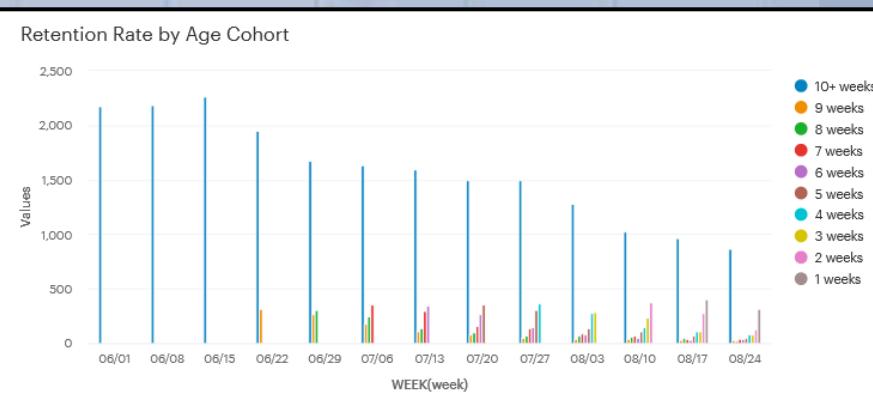
User Growth



```
1 SELECT DATE_TRUNC('day',created_at) AS day,
2       COUNT(*) AS all_users,
3       COUNT(CASE WHEN activated_at IS NOT NULL THEN u.user_id ELSE NULL END) AS activated_users
4   FROM tutorial.yammer_users u
5 WHERE created_at >= '2014-06-01'
6     AND created_at < '2014-09-01'
7 GROUP BY 1
8 ORDER BY 1
```

Query

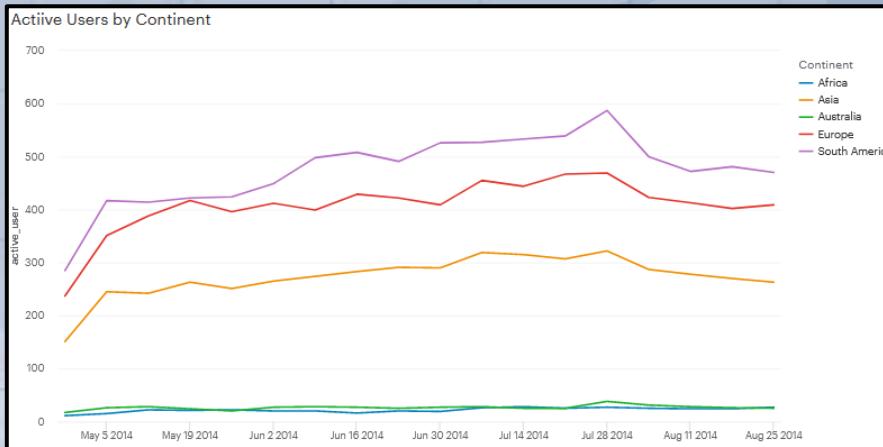
Retention Rate by Age Cohort



```
1 with z AS ( SELECT e.occurred_at,
2   u.user_id,
3   EXTRACT('day' FROM e.occurred_at - u.activated_at) as age_at_event,
4   EXTRACT('day' FROM '2014-09-01' - u.activated_at) as user_age
5   FROM tutorial.yammer_users u
6   INNER JOIN tutorial.yammer_events e
7   ON u.user_id = e.user_id
8   AND e.event_type = 'engagement'
9   AND e.event_name = 'login'
10  AND e.occurred_at >= '2014-06-23'
11  AND e.occurred_at < '2014-09-01'
12  WHERE u.activated_at IS NOT NULL)
13  SELECT DATE_TRUNC('week',occurred_at) AS "week",
14    AVG(age_at_event) AS Avarage_age_during_week,
15    COUNT(distinct CASE WHEN user_age>=70 THEN user_id ELSE NULL END) AS "10+ weeks",
16    COUNT(distinct CASE WHEN user_age<70 AND user_age>=63 THEN user_id ELSE NULL END) AS "9 weeks",
17    COUNT(distinct CASE WHEN user_age<63 AND user_age>=56 THEN user_id ELSE NULL END) AS "8 weeks",
18    COUNT(distinct CASE WHEN user_age<56 AND user_age>=49 THEN user_id ELSE NULL END) AS "7 weeks",
19    COUNT(distinct CASE WHEN user_age<49 AND user_age>=42 THEN user_id ELSE NULL END) AS "6 weeks",
20    COUNT(distinct CASE WHEN user_age<42 AND user_age>=35 THEN user_id ELSE NULL END) AS "5 weeks",
21    COUNT(distinct CASE WHEN user_age<35 AND user_age>=28 THEN user_id ELSE NULL END) AS "4 weeks",
22    COUNT(distinct CASE WHEN user_age<28 AND user_age>=21 THEN user_id ELSE NULL END) AS "3 weeks",
23    COUNT(distinct CASE WHEN user_age<21 AND user_age>=14 THEN user_id ELSE NULL END) AS "2 weeks",
24    COUNT(distinct CASE WHEN user_age<14 AND user_age>=7 THEN user_id ELSE NULL END) AS "1 weeks",
25    COUNT(distinct CASE WHEN user_age<7 THEN user_id ELSE NULL END) AS "less than weeks"
26  FROM z
27  GROUP by 1
28  ORDER by 1
```

Query

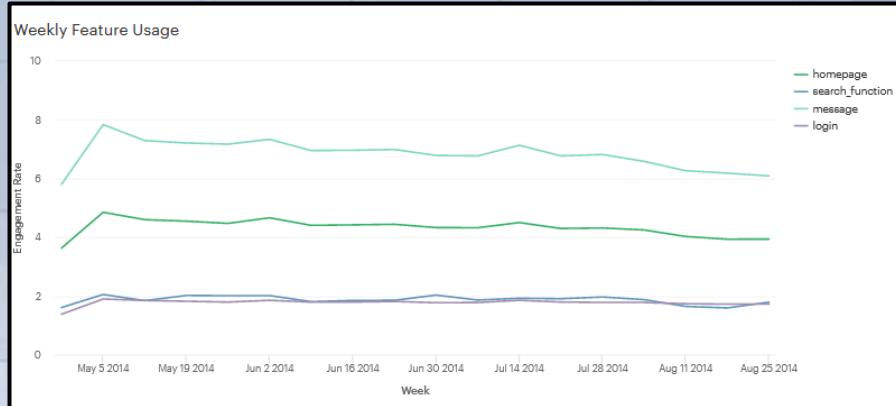
Active Users by Continent



```
1 select
2   DATE_TRUNC('week',occurred_at) as "Week",
3   Case WHEN location in ('Brazil','Colombia','Argentina','Venezuela','Chile','United States','Canada','Mexico') THEN 'South America'
4   | | | WHEN location in ('Germany','France','United Kingdom','Italy','Russia','Spain','Netherlands','Switzerland',
5   | | | | | 'Sweden','Poland','Belgium','Norway','Denmark','Austria','Finland','Greece','Portugal','Ireland') THEN 'Europe'
6   | | | WHEN location in ('Japan','India','Korea','Indonesia','Turkey','Saudi Arabia','Thailand','Taiwan','Iran',
7   | | | | | 'United Arab Emirates','Malaysia','Israel','Hong Kong','Philippines','Singapore','Iraq','Pakistan') THEN 'Asia'
8   | | | WHEN location in ('Nigeria','South Africa','Egypt') THEN 'Africa'
9   | | | WHEN location in ('Australia') THEN 'Australia'
10  | | | ELSE location
11  | | END AS "Continent",
12  | | location,
13  | | count(distinct user_id) as active_user
14  from tutorial.yammer_events
15  WHERE occurred_at BETWEEN '2014-05-01' AND '2014-09-01'
16  AND event_type = 'engagement'
17  group by 1,2,3
18  ORDER BY 2 DESC
```

Query

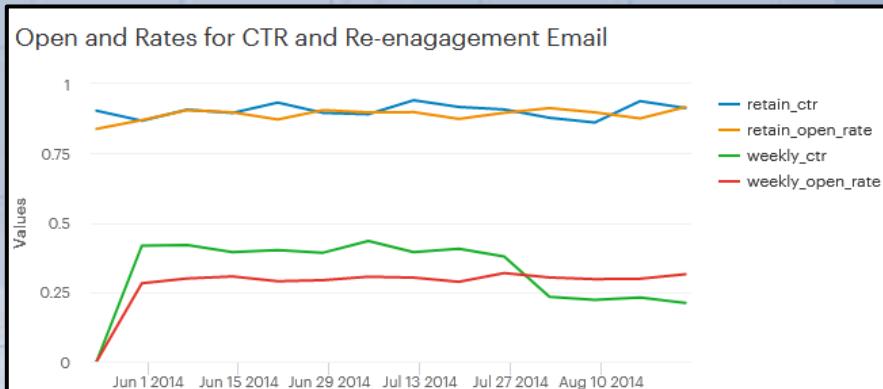
Weekly Feature Usage



```
1 | SELECT DATE_TRUNC('week',occurred_at) AS Week,
2 |   COUNT(CASE WHEN event_name IN ('search_autocomplete','search_click_result_1','search_click_result_10',
3 |                               'search_click_result_2','search_click_result_3','search_click_result_4',
4 |                               'search_click_result_5','search_click_result_6','search_click_result_7',
5 |                               'search_click_result_8','search_click_result_9','search_run')
6 |                               THEN user_id ELSE NULL END)::FLOAT/COUNT(distinct user_id)::FLOAT AS Search_Function,
7 |   COUNT(CASE WHEN event_name IN ('view_inbox','like_message','send_message')
8 |                               THEN user_id ELSE NULL END)::FLOAT/COUNT(distinct user_id)::FLOAT AS message,
9 |   COUNT(CASE WHEN event_name IN ('login') THEN user_id ELSE NULL END)::FLOAT/COUNT(distinct user_id)::FLOAT AS login,
10 |  COUNT(CASE WHEN event_name IN ('home_page') THEN user_id ELSE NULL END)::FLOAT/COUNT(distinct user_id)::FLOAT AS homepage
11 | FROM tutorial.yammer_events
12 | WHERE occurred_at BETWEEN '2014-05-01' AND '2014-09-01'
13 | AND event_name NOT IN ('complete_signup','create_user','enter_email','enter_info')
14 | GROUP BY 1
```

Query

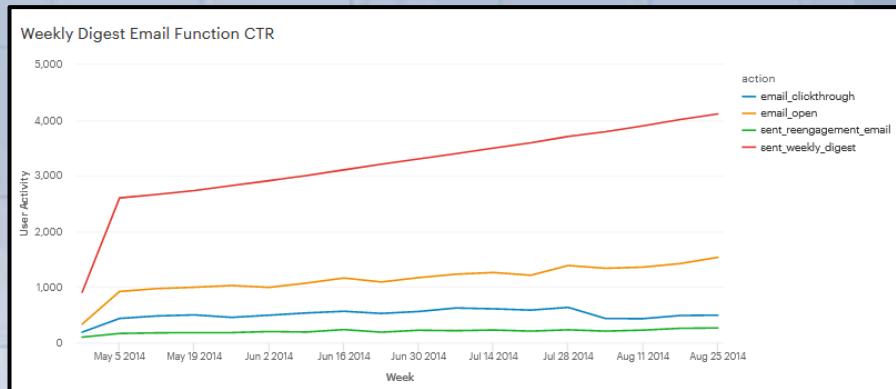
Open and Rates for CTR and Re-engagement Email



```
1 with a AS (
2   SELECT
3     DATE_TRUNC('week',e.occurred_at) AS Week,
4     COUNT( CASE WHEN e.action = 'sent_weekly_digest' THEN e.user_id ELSE NULL END) AS weekly_emails,
5     COUNT( CASE WHEN e.action = 'sent_weekly_digest' THEN e1.user_id ELSE NULL END) AS weeklyOpens,
6     COUNT( CASE WHEN e.action = 'sent_weekly_digest' THEN e2.user_id ELSE NULL END) AS weekly_ctr,
7     COUNT( CASE WHEN e.action = 'sent_reengagement_email' THEN e.user_id ELSE NULL END) AS retain_emails,
8     COUNT( CASE WHEN e.action = 'sent_reengagement_email' THEN e1.user_id ELSE NULL END) AS retainOpens,
9     COUNT( CASE WHEN e.action = 'sent_reengagement_email' THEN e2.user_id ELSE NULL END) AS retain_ctr
10
11   FROM
12     tutorial.yammer_emails e
13     LEFT JOIN tutorial.yammer_emails e1
14     ON e1.user_id = e.user_id
15     AND e1.occurred_at >= e.occurred_at
16     AND e1.occurred_at < e.occurred_at + INTERVAL '5 MINUTE'
17     AND e1.action = 'email_open'
18     LEFT JOIN tutorial.yammer_emails e2
19     ON e2.user_id = e.user_id
20     AND e2.occurred_at >= e.occurred_at
21     AND e2.occurred_at < e.occurred_at + INTERVAL '5 MINUTE'
22     AND e2.action = 'email_clickthrough'
23   WHERE
24     e.occurred_at BETWEEN '2014-06-01' AND '2014-09-01'
25     AND e.action IN ('sent_weekly_digest','sent_reengagement_email')
26   GROUP BY 1
27 )
28
29   SELECT Week,
30   ::weeklyOpens/CASE WHEN weekly_emails = 0 THEN 1 ELSE weekly_emails END::FLOAT AS weekly_open_rate,
31   ::weekly_ctr/CASE WHEN weeklyOpens = 0 THEN 1 ELSE weeklyOpens END::FLOAT AS weekly_ctr,
32   ::retainOpens/CASE WHEN retain_emails = 0 THEN 1 ELSE retain_emails END::FLOAT AS retain_open_rate,
33   ::retain_ctr/CASE WHEN retainOpens = 0 THEN 1 ELSE retainOpens END::FLOAT AS retain_ctr
34   FROM a
35   ORDER BY 1
```

Query

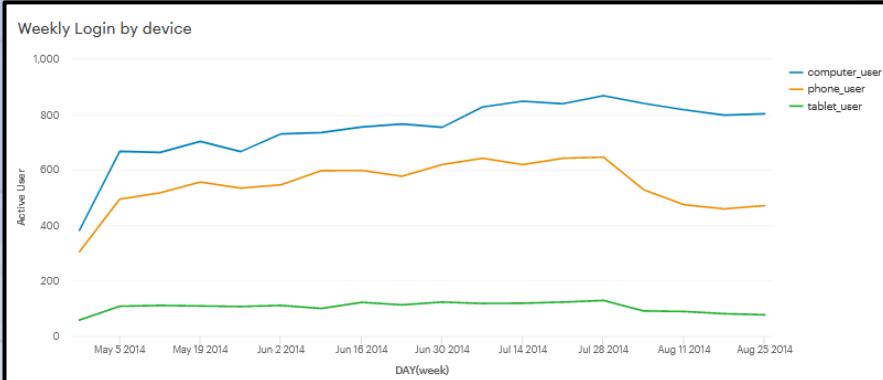
Weekly Digest Email Function CTR



```
1 SELECT DATE_TRUNC('week',occurred_at) AS "Week" ,  
2      action,  
3      COUNT(user_id) AS "User Activity"  
4 FROM tutorial.yammer_emails  
5 WHERE occurred_at BETWEEN '2014-05-01' AND '2014-09-01'  
6 Group by 1,2  
7  
8
```

Query

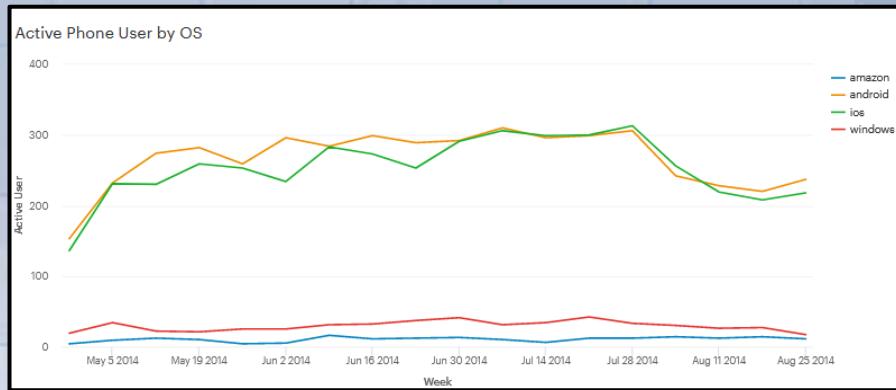
Weekly Active Users by Device



```
1 | SELECT
2 | DATE_TRUNC ('week',occurred_at) AS Week,
3 | COUNT(DISTINCT CASE WHEN device IN ('iphone 5','samsung galaxy s4', 'nexus 5',
4 |           'iphone 5s', 'iphone 4s','nexus 7',
5 |           'nokia lumia 635','nexus 10', 'htc one', 'amazon fire phone',
6 |           'samsung galaxy note')
7 |           THEN user_id ELSE NULL END) AS Phone_User,
8 | COUNT(DISTINCT CASE WHEN device IN ('ipad air','ipad mini', 'kindle fire', 'samsung galaxy tablet')
9 |           THEN user_id ELSE NULL END) AS Tablet_User,
10 | COUNT(DISTINCT CASE WHEN device IN ('lenovo thinkpad','macbook pro','macbook air','dell inspiron desktop',
11 |           'dell inspiron notebook','asus chromebook','acer aspire notebook',
12 |           'hp pavilion desktop','acer aspire desktop','windows surface','mac mini')
13 |           THEN user_id ELSE NULL END) AS Computer_User
14 | FROM tutorial.yammer_events
15 | WHERE event_name = 'login'
16 | AND occurred_at BETWEEN '2014-05-01' AND '2014-09-01'
17 | GROUP BY 1
18 |
```

Query

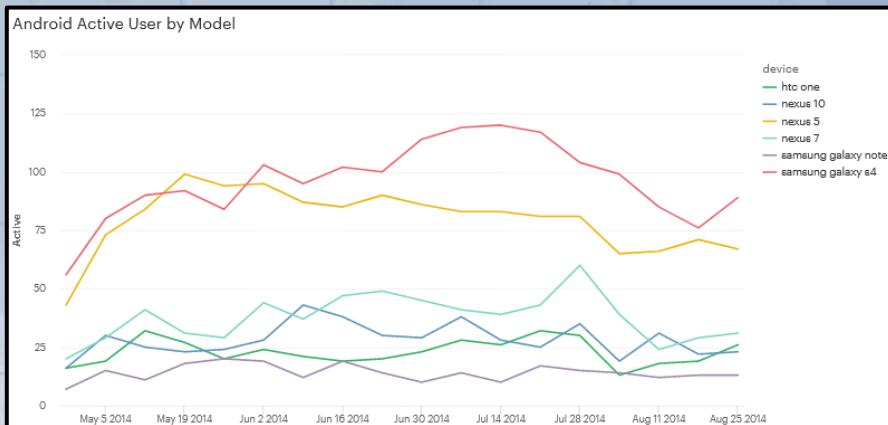
Active User by OS



```
1 | SELECT
2 | DATE_TRUNC ('week',occurred_at) AS Week,
3 | COUNT(distinct CASE WHEN device IN ('nokia lumia 635') THEN user_id ELSE NULL END ) AS Windows,
4 | COUNT(distinct CASE WHEN device IN ('iphone 5','iphone 5s', 'iphone 4s')
5 | THEN user_id ELSE NULL END) AS IOS,
6 | COUNT(distinct CASE WHEN device IN ('nexus 5','nexus 7','samsung galaxy s4','samsung galaxy note','htc one','nexus 10')
7 | THEN user_id ELSE NULL END) AS Android,
8 | COUNT(distinct CASE WHEN device IN ('amazon fire phone')
9 | THEN user_id ELSE NULL END) AS Amazon
10| FROM tutorial.yammer_events
11| WHERE event_name = 'login'
12| AND occurred_at BETWEEN '2014-05-01' AND '2014-09-01'
13| GROUP BY 1
14|
```

Query

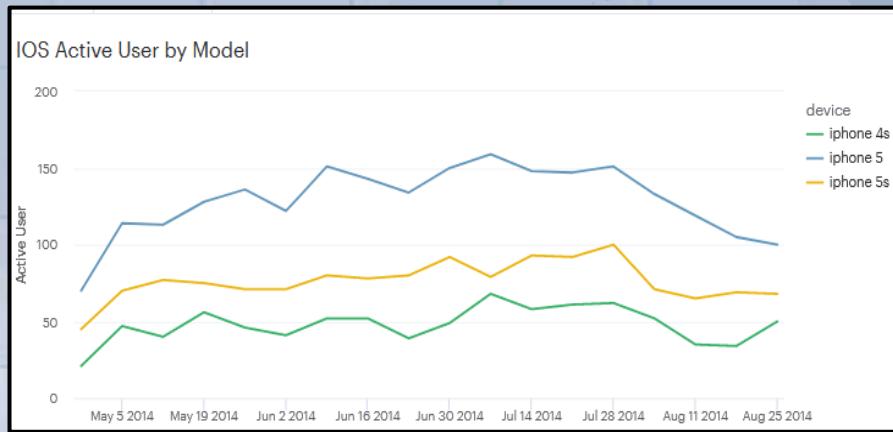
Android Active User by Model



```
1 SELECT
2   DATE_TRUNC ('week',occurred_at) AS Week,
3   device,
4   count(distinct user_id)
5 FROM tutorial.yammer_events
6 WHERE event_name = 'login'
7 AND occurred_at BETWEEN '2014-05-01' AND '2014-09-01'
8 AND device IN ('nexus 5','nexus 7','samsung galaxy s4',
9                 'samsung galaxy note','htc one','nexus 10')
10 GROUP BY 1,2
```

Query

IOS Active User by Model



```
1 SELECT
2   DATE_TRUNC ('week',occurred_at) AS Week,
3   device,
4   count(distinct user_id)
5 FROM tutorial.yammer_events
6 WHERE event_name = 'login'
7 AND occurred_at BETWEEN '2014-05-01' AND '2014-09-01'
8 AND device IN ('iphone 5','iphone 5s', 'iphone 4s')
9 GROUP BY 1,2
10
```