INVESTIGATING METRIC SPIKE – CASE STUDY 2

Project Description: The Project entails investigative analysis into the metric spike of the company. The User, Events, Email tables are provided for use to derive insights that will help understand the engagement dip & daily use details that will help retain existing users & acquire new customer base.

Approach:

- Tutorials.Yammer_Events Database was used for this Case Study.
- Understand the data & the requirements for deriving the output for the given questions.
- Write queries to extract the insights & Copy to the project file.

Tech-Stack Used:

- MS Excel, Word were used for the dataset & Project file creation.
- MySQL Workbench was used as query tool.

Result:

How this project helped me: This project helps me to understand the importance of operation Through this project I am able to understand how the companies use metric spike. With an informed and proactive approach, they can leverage insights to make optimize their strategy and boost ROI.

Conclusion: Operational Analytics tackles the problem by synchronizing real Analytics has the capability to aggregate data from multiple data sources into a cumulative, organized, actionable solution capable of delivering analytical models in real profiles and a holistic view of operations and systems are used efficiently. Whenever utilized correctly significant positive effect on our general public and world everywhere and increment the general efficiency of specific areas.

This project helps me to understand the importance of operation
With an informed and proactive approach, they can leverage insights to make data-backed decisions that optimize their strategy and boost ROI.
Challenges that I faced in this project: The challenge here is that the data in case study 2 as the huge amount of data SQL Workbench is very slow to import it.

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INSIGHTS:

A. User Engagement: To measure the activeness of a user. Measuring if the user finds quality in a product/service.

B.   Your task: Calculate the weekly user engagement?

Query:

Select Extract(Week from occurred_at) week_num, Count (Distinct User_id)
From tutorial.yammer_events
Group By Week_num

	Data	Fields	Source	
	week_num		count	
1	18		791	
2	19		1244	
3	20		1270	
4	21		1341	
5	22		1293	
6	23		1366	
7	24		1434	
8	25		1462	
9	26		1443	

B. User Growth: Amount of users growing over time for a product.
Your task: Calculate the user growth for product?

Query :

Select Year_E, week_num, active_user_num,

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Sum(active_user_num) over (Order by Year_E, week_num Rows between unbounded preceding and current row) as Cum_active_Users
From
(select
Extract(year from activated_at) Year_E, Extract(week from activated_at) as week_num,
COUNT(distinct user_id) active_user_num
from tutorial.yammer_users
WHERE state = 'active'
Group by Year_E, week_num
Order by year_E,Week_num) W

Data   Fields   Source

	year_e	week_num	active_user_num	cum_active_users
1	2013	1	67	67
2	2013	2	29	96
3	2013	3	47	143
4	2013	4	36	179
5	2013	5	30	209
6	2013	6	48	257
7	2013	7	41	298
8	2013	8	39	337
9	2013	9	33	370

**C. Weekly Retention: Users getting retained weekly after signing-up for a product.
Your task: Calculate the weekly retention of users-sign up cohort?**

Query:
Select First As "Week_Numbers",
Sum(Case When Week_number = 0 Then 1 Else 0 End) As "Week 0",
Sum(Case When Week_number = 1 Then 1 Else 0 End) As "Week 1",
Sum(Case When Week_number = 2 Then 1 Else 0 End) As "Week 2",
Sum(Case When Week_number = 3 Then 1 Else 0 End) As "Week 3",
Sum(Case When Week_number = 4 Then 1 Else 0 End) As "Week 4",
Sum(Case When Week_number = 5 Then 1 Else 0 End) As "Week 5",

Sum(Case When Week_number = 6 Then 1 Else 0 End) As "Week 6",
Sum(Case When Week_number = 7 Then 1 Else 0 End) As "Week 7",
Sum(Case When Week_number = 8 Then 1 Else 0 End) As "Week 8",
Sum(Case When Week_number = 9 Then 1 Else 0 End) As "Week 9",
Sum(Case When Week_number = 10 Then 1 Else 0 End) As "Week 10",
Sum(Case When Week_number = 11 Then 1 Else 0 End) As "Week 11",
Sum(Case When Week_number = 12 Then 1 Else 0 End) As "Week 12",
Sum(Case When Week_number = 13 Then 1 Else 0 End) As "Week 13",
Sum(Case When Week_number = 14 Then 1 Else 0 End) As "Week 14",
Sum(Case When Week_number = 15 Then 1 Else 0 End) As "Week 15",
Sum(Case When Week_number = 16 Then 1 Else 0 End) As "Week 16",
Sum(Case When Week_number = 17 Then 1 Else 0 End) As "Week 17",
Sum(Case When Week_number = 18 Then 1 Else 0 End) As "Week 18"
From
(Select M.User_id,M.Login_week,N.First,M.Login_week-First As Week_number
From
(Select User_id, Extract(Week From Occurred_at) As Login_Week From
tutorial.yammer_events Group By 1,2) M,
(Select User_id, MIN(Extract(Week From Occurred_at)) As First From
tutorial.yammer_events Group By 1) N
Where M.User_id = N.User_id) Sub
Group By First
Order By First

	Week_Numbers	Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
1	18	791	487	332	256	214	192	169	149
2	19	757	336	246	194	160	142	135	121
3	20	602	287	174	156	112	95	87	81
4	21	552	211	159	118	92	70	62	67
5	22	500	179	133	92	75	65	76	72
6	23	520	215	150	110	88	77	63	62
7	24	545	218	138	96	83	76	69	60
8	25	531	189	141	100	81	62	63	60
9	26	502	202	142	101	79	64	51	44
10	27	492	171	112	83	71	52	47	44
11	28	494	188	119	110	68	53	38	36
12	29	485	177	111	65	44	31	29	0
13	30	507	180	102	71	48	38	0	0
14	31	532	183	120	76	56	0	0	0
15	32	428	135	76	53	0	0	0	0
16	33	495	177	95	0	0	0	0	0

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    D. Weekly Engagement: To measure the activeness of a user. Measuring if the user finds quality in a product/service weekly.
        Your task: Calculate the weekly engagement per device?

Query :

Select Extract (Year from occurred_at) Year_EV,
Extract (Week from occurred_at) Week_EV,
Device, Count(Distinct User_id)
from tutorial.yammer_events
Where event_type = 'engagement'
Group By 1, 2, 3
Order by Year_Ev, Week_Ev

Data   Fields   Source

	year_ev	week_ev	device	count
1	2014	18	acer aspire desktop	10
2	2014	18	acer aspire notebook	21
3	2014	18	amazon fire phone	4
4	2014	18	asus chromebook	23
5	2014	18	dell inspiron desktop	21
6	2014	18	dell inspiron notebook	49
7	2014	18	hp pavilion desktop	15
8	2014	18	htc one	16
9	2014	18	ipad air	30