Operation Analytics and Investigating Metric Spike

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Description

This project focuses mainly on two key aspects Operations Analytic and Metric Spike. Based on the user engagement and the data collected the insights needs to be carried out and presented to the product team. The project will answer to the important questions like :

> Throughput
> User Engagement
> Weekly Retention

> Weekly Engagement

> Email Engagement.

> User Growth .

Tech-Stack Used

SQL Server Management Studio version 15.0.18142.0

Purpose – This tool is used o create the data base and store records. It is also used to carry out the required analysis by writing SQL queries.

Microsoft® Excel® 2016 MSO (Version 2212 Build 16.0.15928.20002)

Purpose - This tool is used to create graphical representation of the results and to understand the result set better.

Approach

First I created the database in SQL Server by importing the excel sheets provided for this project. After creating the required tables I spend some time to understand each columns in the tables. After that I carried my analysis by writing SQL queries and showcasing analysis using excel.
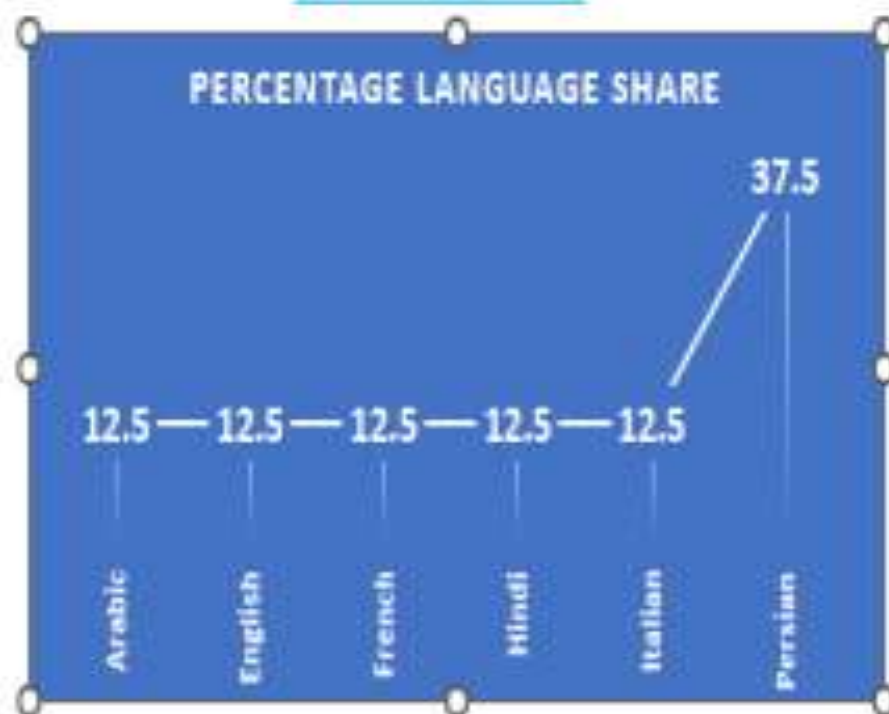
JOBS REVIEWED

DATE	JOBS PER DAY	HOURS SPENT
25/11/2020	1	0.01
26/11/2020	1	0.02
27/11/2020	1	0.03
28/11/2020	2	0.01
29/11/2020	1	0.01
30/11/2020	2	0.01

THROUGHPUT 7DAY ROLLING AVERAGE

THROUGHPUT	JOB ID	DATE	AVERAGE
0.02	20	25/11/2020	0.02
0.02	23	26/11/2020	0.02
0.01	11	27/11/2020	0.01
0.09	25	28/11/2020	0.09
0.05	23	28/11/2020	0.03
0.05	23	29/11/2020	0.04
0.07	21	30/11/2020	0.07
0.04	22	30/11/2020	0.04

LANGUAGE SHARE

PERCENTAGE LANGUAGE SHARE

Arabic	English	French	Hindi	Italian	Persian
12.5	12.5	12.5	12.5	12.5	37.5

WEEKLY USER ENGAGEMENT

❖ Regular user engagements are being observed on a weekly basis for the year of 2014
❖ No user engagements has been observed for the year of 2013
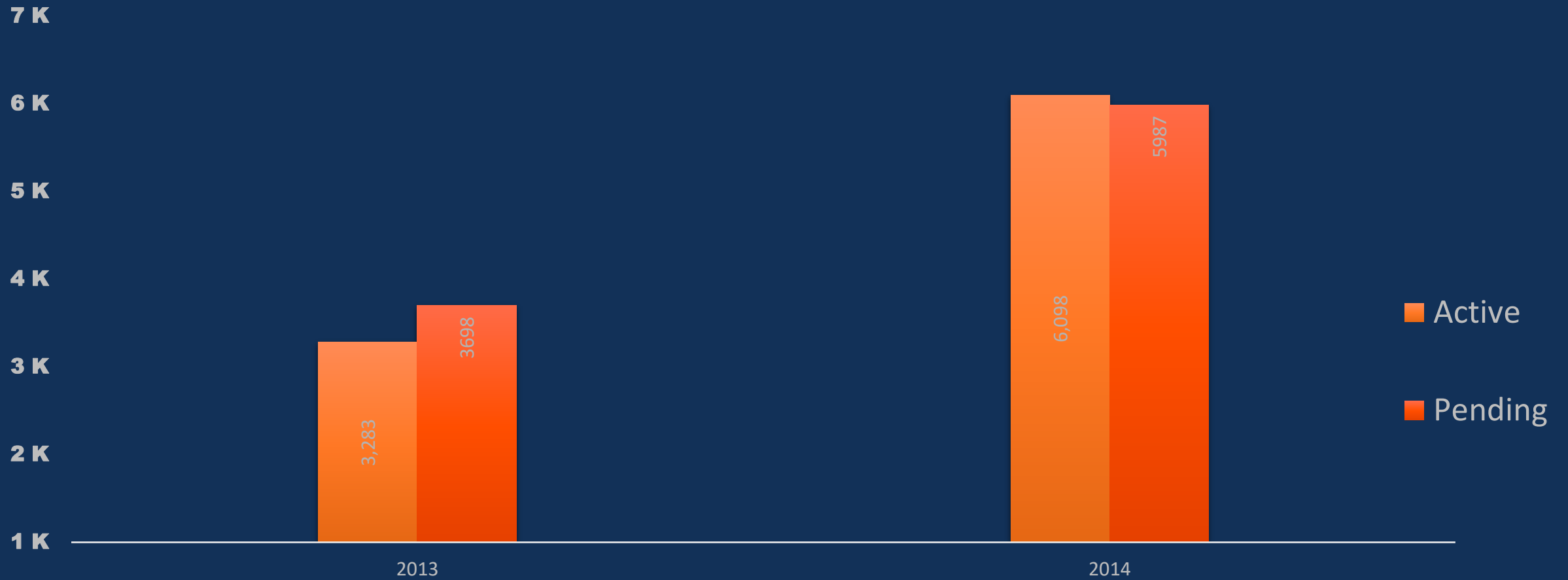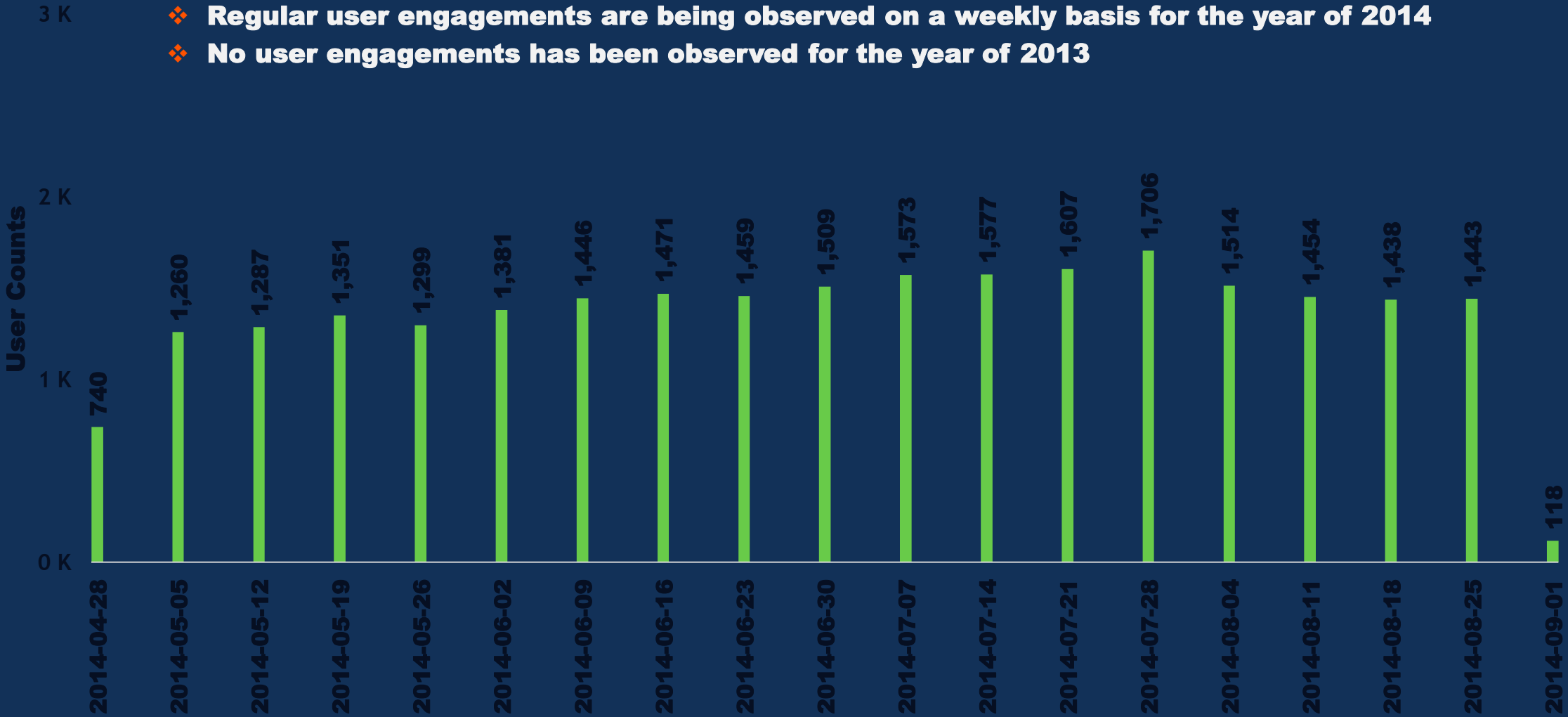
USER GROWTH OVER TIME

❖ **A major dip of 192 has been observed in the week 33**

WEEKLY RETENTION USER-SIGNUP COHORT

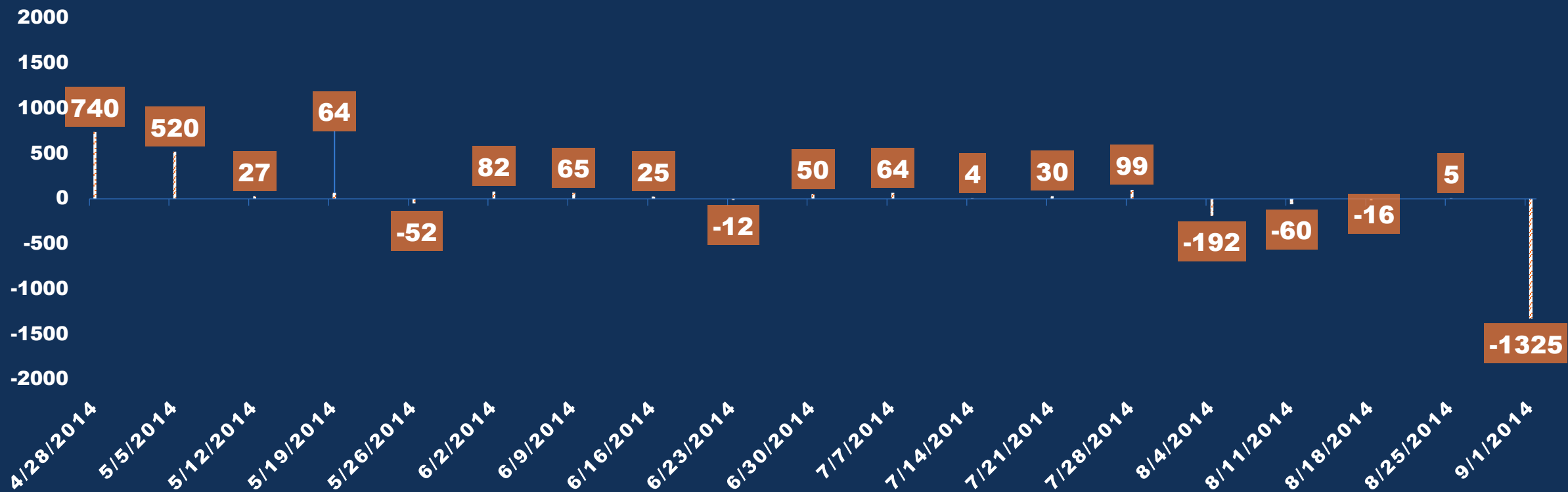| Signed-up Week	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
2014-04-28	740	64%	44%	34%	28%	25%	23%	20%	20%	20%	18%	18%	18%	19%	16%	12%	11%	10%	1%
2014-05-05	788	46%	33%	26%	21%	19%	18%	16%	14%	15%	13%	15%	16%	14%	12%	11%	9%	1%	0%
2014-05-12	601	47%	29%	25%	19%	16%	15%	13%	16%	14%	11%	11%	10%	7%	8%	8%	0%	0%	0%
2014-05-19	555	40%	30%	22%	16%	13%	11%	12%	11%	12%	12%	7%	7%	6%	7%	0%	0%	0%	0%
2014-05-26	495	38%	26%	18%	15%	13%	15%	15%	12%	10%	9%	8%	7%	6%	0%	0%	0%	0%	0%
2014-06-02	521	43%	29%	21%	17%	14%	12%	12%	11%	9%	8%	7%	6%	0%	0%	0%	0%	0%	0%
2014-06-09	542	40%	25%	19%	17%	15%	13%	11%	10%	9%	6%	6%	0%	0%	0%	0%	0%	0%	0%
2014-06-16	535	38%	27%	19%	15%	12%	12%	11%	7%	7%	5%	0%	0%	0%	0%	0%	0%	0%	0%
2014-06-23	500	44%	28%	20%	15%	13%	10%	9%	8%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2014-06-30	495	37%	23%	17%	15%	11%	9%	9%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2014-07-07	493	40%	25%	22%	14%	11%	8%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2014-07-14	486	40%	23%	14%	9%	6%	6%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2014-07-21	501	37%	20%	13%	9%	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2014-07-28	533	38%	23%	15%	10%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2014-08-04	430	34%	18%	13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2014-08-11	496	38%	19%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2014-08-18	499	40%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2014-08-25	518	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2014-09-01	32	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

WEEKLY ENGAGEMENT/ DEVICE

❖ **MacBook pro device has the highest user engagement amongst all other devices combining all the weeks**
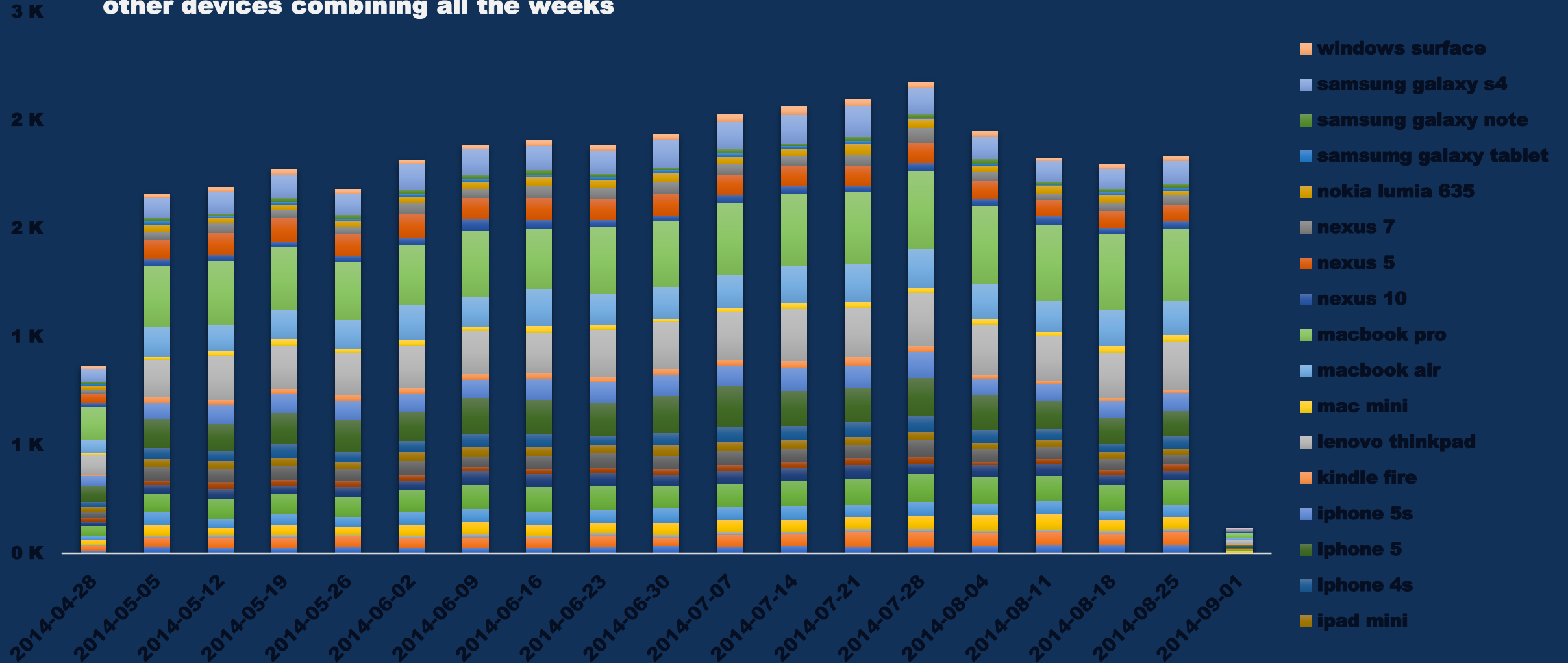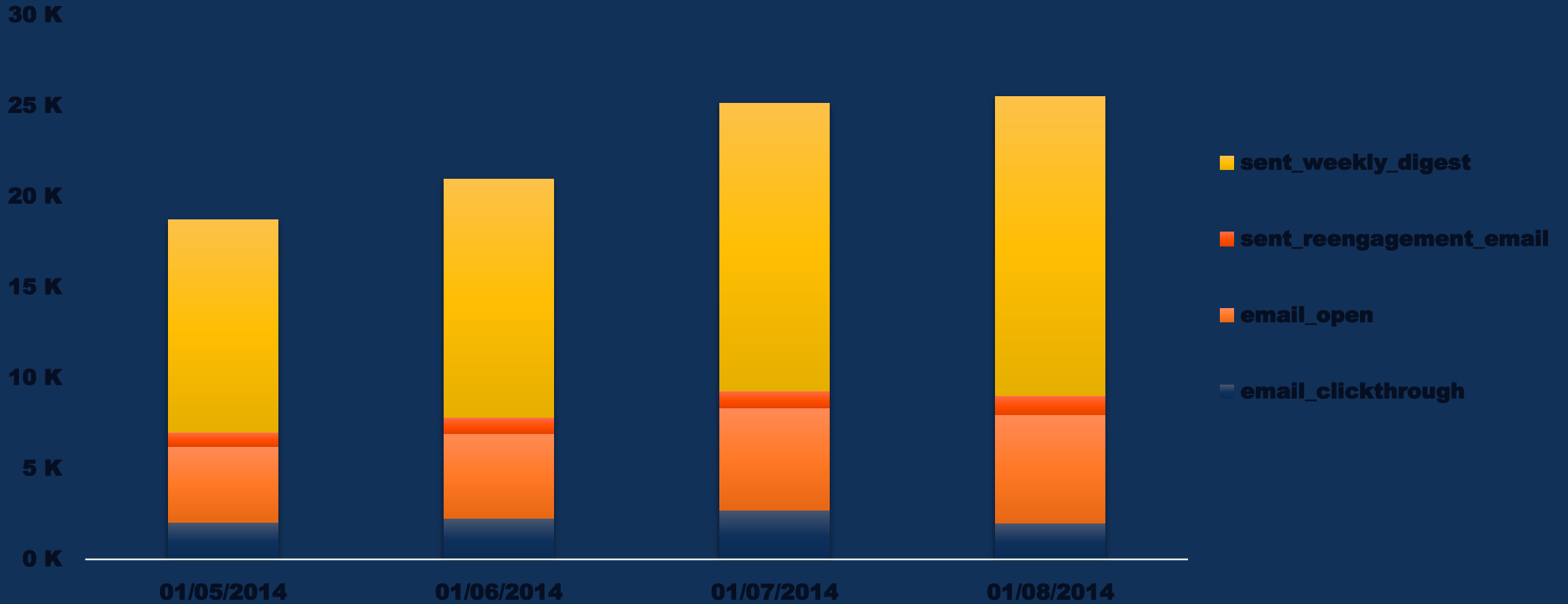
Conclusion

- The project answers the questions and thus provides the required insights relevant for the product team.

- This project has helped me to understand how data can be of relevance to a business and has helped to hone my SQL skills and Excel skills.