

# Investigating a Drop in User Engagement

## Problem

	date_trunc	weekly_active_users
1	2014-04-28 00:00:00	701
2	2014-05-05 00:00:00	1054
3	2014-05-12 00:00:00	1094
4	2014-05-19 00:00:00	1147
5	2014-05-26 00:00:00	1113
6	2014-06-02 00:00:00	1173
7	2014-06-09 00:00:00	1219
8	2014-06-16 00:00:00	1262
9	2014-06-23 00:00:00	1249
10	2014-06-30 00:00:00	1271
11	2014-07-07 00:00:00	1355
12	2014-07-14 00:00:00	1345
13	2014-07-21 00:00:00	1363
14	2014-07-28 00:00:00	1442
15	2014-08-04 00:00:00	1266
16	2014-08-11 00:00:00	1215
17	2014-08-18 00:00:00	1203
18	2014-08-25 00:00:00	1194

## New\_User\_Register

	date_trunc	weekly_new_users
1	2014-04-28 00:00:00	171
2	2014-05-05 00:00:00	350
3	2014-05-12 00:00:00	362
4	2014-05-19 00:00:00	371
5	2014-05-26 00:00:00	366
6	2014-06-02 00:00:00	390
7	2014-06-09 00:00:00	413
8	2014-06-16 00:00:00	421
9	2014-06-23 00:00:00	404
10	2014-06-30 00:00:00	405
11	2014-07-07 00:00:00	424
12	2014-07-14 00:00:00	426
13	2014-07-21 00:00:00	458
14	2014-07-28 00:00:00	476
15	2014-08-04 00:00:00	406
16	2014-08-11 00:00:00	473
17	2014-08-18 00:00:00	468
18	2014-08-25 00:00:00	514

## Companies

	date_trunc	company_id	weekly_active_users
1	2014-04-28 00:00:00	1	48
2	2014-05-05 00:00:00	1	60
3	2014-05-12 00:00:00	1	57
4	2014-05-19 00:00:00	1	64
5	2014-05-26 00:00:00	1	60
6	2014-06-02 00:00:00	1	63
7	2014-06-09 00:00:00	1	65
8	2014-06-16 00:00:00	1	71
9	2014-06-23 00:00:00	1	62
10	2014-06-30 00:00:00	1	72
11	2014-07-07 00:00:00	1	72
12	2014-07-14 00:00:00	1	72
13	2014-07-21 00:00:00	1	79
14	2014-07-28 00:00:00	1	89
15	2014-08-04 00:00:00	1	78
16	2014-08-11 00:00:00	1	72
17	2014-08-18 00:00:00	1	71
18	2014-08-25 00:00:00	1	71
19	2014-04-28 00:00:00	2	26
20	2014-05-05 00:00:00	2	35
21	2014-05-12 00:00:00	2	39
22	2014-05-19 00:00:00	2	38
23	2014-05-26 00:00:00	2	28
24	2014-06-02 00:00:00	2	35
25	2014-06-09 00:00:00	2	32
26	2014-06-16 00:00:00	2	38
27	2014-06-23 00:00:00	2	39
28	2014-06-30 00:00:00	2	39
29	2014-07-07 00:00:00	2	37
30	2014-07-14 00:00:00	2	41
31	2014-07-21 00:00:00	2	40
32	2014-07-28 00:00:00	2	36
33	2014-08-04 00:00:00	2	35
34	2014-08-11 00:00:00	2	35
35	2014-08-18 00:00:00	2	34
36	2014-08-25 00:00:00	2	27
37	2014-04-28 00:00:00	3	15
38	2014-05-05 00:00:00	3	20
39	2014-05-12 00:00:00	3	24
40	2014-05-19 00:00:00	3	16
41	2014-05-26 00:00:00	3	17
42	2014-06-02 00:00:00	3	25
43	2014-06-09 00:00:00	3	20

44	2014-06-16 00:00:00	3	24
45	2014-06-23 00:00:00	3	22
46	2014-06-30 00:00:00	3	23
47	2014-07-07 00:00:00	3	23
48	2014-07-14 00:00:00	3	26
49	2014-07-21 00:00:00	3	19
50	2014-07-28 00:00:00	3	23
51	2014-08-04 00:00:00	3	27
52	2014-08-11 00:00:00	3	22
53	2014-08-18 00:00:00	3	26
54	2014-08-25 00:00:00	3	30
55	2014-05-05 00:00:00	4	17
56	2014-05-12 00:00:00	4	14
57	2014-05-26 00:00:00	4	11
58	2014-06-02 00:00:00	4	12
59	2014-06-09 00:00:00	4	12
60	2014-06-23 00:00:00	4	12
61	2014-06-30 00:00:00	4	13
62	2014-07-07 00:00:00	4	16
63	2014-07-14 00:00:00	4	16
64	2014-07-21 00:00:00	4	15
65	2014-07-28 00:00:00	4	24
66	2014-08-04 00:00:00	4	18
67	2014-08-11 00:00:00	4	15
68	2014-08-18 00:00:00	4	13
69	2014-08-25 00:00:00	4	12
70	2014-06-23 00:00:00	5	12
71	2014-06-30 00:00:00	5	13
72	2014-07-07 00:00:00	5	13
73	2014-07-14 00:00:00	5	13
74	2014-07-21 00:00:00	5	11
75	2014-07-28 00:00:00	5	14
76	2014-08-04 00:00:00	5	15
77	2014-08-11 00:00:00	5	12
78	2014-05-26 00:00:00	6	12
79	2014-06-09 00:00:00	6	14
80	2014-06-16 00:00:00	6	16
81	2014-06-23 00:00:00	6	11
82	2014-06-30 00:00:00	6	14
83	2014-07-07 00:00:00	6	17
84	2014-07-14 00:00:00	6	19
85	2014-07-21 00:00:00	6	18
86	2014-07-07 00:00:00	7	11
87	2014-07-14 00:00:00	7	12
88	2014-07-28 00:00:00	7	12

89	2014-07-21 00:00:00	8	11
90	2014-07-28 00:00:00	8	12
91	2014-08-04 00:00:00	8	14
92	2014-08-11 00:00:00	8	19

## Email\_Service

	date_trunc	email_weekly_digest	email_open	email_clickthrough	reengagement_emails	email_total
1	2014-04-28 00:00:00	908	332	187	98	1525
2	2014-05-05 00:00:00	2602	919	434	164	4119
3	2014-05-12 00:00:00	2665	971	479	175	4290
4	2014-05-19 00:00:00	2733	995	498	179	4405
5	2014-05-26 00:00:00	2822	1026	453	179	4480
6	2014-06-02 00:00:00	2911	993	492	199	4595
7	2014-06-09 00:00:00	3003	1070	533	190	4796
8	2014-06-16 00:00:00	3105	1161	563	234	5063
9	2014-06-23 00:00:00	3207	1090	524	187	5008
10	2014-06-30 00:00:00	3302	1168	559	222	5251
11	2014-07-07 00:00:00	3399	1230	622	214	5465
12	2014-07-14 00:00:00	3499	1260	607	226	5592
13	2014-07-21 00:00:00	3592	1211	584	206	5593
14	2014-07-28 00:00:00	3706	1386	633	230	5955
15	2014-08-04 00:00:00	3793	1336	432	206	5767
16	2014-08-11 00:00:00	3897	1357	430	224	5908
17	2014-08-18 00:00:00	4012	1421	487	257	6177
18	2014-08-25 00:00:00	4111	1533	493	263	6400

## General\_Service

	date_trunc	user_signing	user_signed	home_page_rate	like_message_rate	search_rate	send_message_rate	view
1	2014-04-28 00:00:...	102	81	0.32878696439...	0.21412190706...	0.04490042245...	0.11647555823...	0.11
2	2014-05-05 00:00:...	205	160	0.32641901931...	0.21491827637...	0.04748885586...	0.12172362555...	0.11
3	2014-05-12 00:00:...	218	186	0.33247564785...	0.21393126263...	0.04294553697...	0.11799301599...	0.11
4	2014-05-19 00:00:...	218	177	0.32785538208...	0.21258363657...	0.04701256015...	0.12031928630...	0.11
5	2014-05-26 00:00:...	227	186	0.32407184185...	0.21178881388...	0.04881870781...	0.11559787849...	0.11
6	2014-06-02 00:00:...	246	197	0.33193894855...	0.20689655172...	0.04607122668...	0.11899378179...	0.11
7	2014-06-09 00:00:...	250	198	0.33406631560...	0.21179329899...	0.04623575024...	0.11683351657...	0.11
8	2014-06-16 00:00:...	262	222	0.33296244784...	0.20645340751...	0.04250347705...	0.11977746870...	0.11
9	2014-06-23 00:00:...	247	210	0.33228523301...	0.20971364402...	0.04272880404...	0.11678832116...	0.11
10	2014-06-30 00:00:...	239	199	0.32559302261...	0.20521082162...	0.05138603410...	0.11449363924...	0.11
11	2014-07-07 00:00:...	269	223	0.33098850333...	0.20636253871...	0.04441178014...	0.11202687805...	0.11
12	2014-07-14 00:00:...	260	215	0.32967144746...	0.20613365883...	0.04333231614...	0.11835011697...	0.11
13	2014-07-21 00:00:...	271	228	0.32900410137...	0.20396466505...	0.04606162582...	0.11462824692...	0.21
14	2014-07-28 00:00:...	274	234	0.32602217771...	0.20340970152...	0.05016853109...	0.11533388696...	0.11
15	2014-08-04 00:00:...	223	189	0.33245966567...	0.20432174267...	0.04345040479...	0.11281961675...	0.11
16	2014-08-11 00:00:...	289	250	0.33666474469...	0.20500993016...	0.04260362611...	0.11480556089...	0.21
17	2014-08-18 00:00:...	294	259	0.33348766452...	0.21145578411...	0.03961902242...	0.11270586679...	0.11
18	2014-08-25 00:00:...	313	266	0.33094289508...	0.19873837981...	0.04521912350...	0.11128818061...	0.21

## Temp\_Query

device

1	kindle fire
2	macbook pro
3	acer aspire notebook
4	acer aspire desktop
5	lenovo thinkpad
6	iphone 5s
7	samsung galaxy note
8	mac mini
9	ipad mini
10	nokia lumia 635
11	nexus 7
12	nexus 10
13	samsung galaxy tablet
14	amazon fire phone
15	dell inspiron desktop
16	dell inspiron notebook
17	nexus 5
18	iphone 4s
19	windows surface
20	htc one
21	iphone 5
22	ipad air
23	macbook air
24	samsung galaxy s4
25	asus chromebook
26	hp pavilion desktop