

# **Business Analytics with Digital Marketing**

**BUSINESS ANALYTICS**

**CAPSTONE PROJECT**

**Submitted**  
**RAMYA.A**

# Instagram User Analytics

## → Marketing Analysis:

### I) Loyal User Reward:

INPUT:

```
select * from users  
order by created_at asc  
limit 5
```

OUTPUT:

	<b>id</b>	<b>username</b>	<b>created_at</b>
	180	Darby_Herzog	2016-05-06 00:14:21
	80	Darby_Herzog	2016-05-06 00:14:21
	167	Emilio_Bernier52	2016-05-06 13:04:30
	67	Emilio_Bernier52	2016-05-06 13:04:30
	63	Elenor88	2016-05-08 01:30:41
	NULL	NULL	NULL

### II) Inactive User Engagement:

INPUT:

```
select * from users as a  
left join photos as b on  
a.id = b.user_id and  
b.user_id is null
```

## OUTPUT:

	<b>id</b>	<b>username</b>	<b>created_at</b>	<b>id</b>	<b>image_url</b>	<b>user_id</b>	<b>created_dat</b>
1	Kenton_Kirlin	2017-02-16 18:22:11	NULL	NULL	NULL	NULL	NULL
2	Andre_Purdy85	2017-04-02 17:11:21	NULL	NULL	NULL	NULL	NULL
3	Harley_Lind18	2017-02-21 11:12:33	NULL	NULL	NULL	NULL	NULL
4	Arely_Bogan63	2016-08-13 01:28:43	NULL	NULL	NULL	NULL	NULL
5	Aniya_Hackett	2016-12-07 01:04:39	NULL	NULL	NULL	NULL	NULL
6	Travon_Waters	2017-04-30 13:26:14	NULL	NULL	NULL	NULL	NULL
7	Kassandra_Homenick	2016-12-12 06:50:08	NULL	NULL	NULL	NULL	NULL
8	Tabitha_Schamberger11	2016-08-20 02:19:46	NULL	NULL	NULL	NULL	NULL
9	Gus93	2016-06-24 19:36:31	NULL	NULL	NULL	NULL	NULL
10	Presley_McClure	2016-08-07 16:25:49	NULL	NULL	NULL	NULL	NULL
11	Justina_Gaylord27	2017-05-04 16:32:16	NULL	NULL	NULL	NULL	NULL
12	Derek65	2017-01-19 01:34:14	NULL	NULL	NULL	NULL	NULL
13	Alexandro35	2017-03-29 17:09:02	NULL	NULL	NULL	NULL	NULL
14	Jadyn81	2017-02-06 23:29:16	NULL	NULL	NULL	NULL	NULL
15	Billy52	2016-10-05 14:10:20	NULL	NULL	NULL	NULL	NULL
16	Annalise_McKenzie16	2016-08-02 21:32:46	NULL	NULL	NULL	NULL	NULL
17	Norbert_Carroll35	2017-02-06 22:05:43	NULL	NULL	NULL	NULL	NULL
18	Odessa2	2016-10-21 18:16:56	NULL	NULL	NULL	NULL	NULL
19	Hailee26	2017-04-29 18:53:40	NULL	NULL	NULL	NULL	NULL
20	Delpha.Kihn	2016-08-31 02:42:30	NULL	NULL	NULL	NULL	NULL

### III) Contest Winner Declaration:

#### INPUT:

```
select * from  
  (select user_id, count(photo_id) as cnt from likes  
   group by user_id  
   order by cnt desc) as a  
 left join users as b on a.user_id = b.id
```

#### Output:

	user_id	cnt	id	username	created_at
▶	21	257	21	Rocio33	2017-01-23 11:51:15
	71	257	71	Nia_Haag	2016-05-14 15:38:50
	5	257	5	Aniya_Hackett	2016-12-07 01:04:39
	66	257	66	Mike.Auer39	2016-07-01 17:36:15
	41	257	41	Mckenna17	2016-07-17 17:25:45
	14	257	14	Jadyn81	2017-02-06 23:29:16
	57	257	57	Julien_Schmidt	2017-02-02 23:12:48
	24	257	24	Maxwell.Halvorson	2017-04-18 02:32:44
	76	257	76	Janelle.Nikolaus81	2016-07-21 09:26:09
	75	257	75	Leslie67	2016-09-21 05:14:01
	54	257	54	Duane60	2016-12-21 04:43:38
	91	257	91	Bethany20	2016-06-03 23:31:53
	36	257	36	Ollie_Ledner37	2016-08-04 15:42:20
	16	103	16	Annalise.McKenzi...	2016-08-02 21:32:46

#### IV) Hashtag Research:

INPUT:

```
select a.tag_name, count(b.tag_id) as cnt from tags as a
left join photo_tags as b
on a.id=b.tag_id
group by a.tag_name
order by cnt desc limit 5
```

OUTPUT:

	tag_name	cnt
▶	smile	59
	beach	42
	party	39
	fun	38
	concert	24

#### V) Ad Campaign Launch:

**INPUT:**

```
select week(created_at) as wk ,  
       count(week(created_at)) as cnt from users  
      group by wk  
      order by cnt desc
```

**OUTPUT:**

wk	cnt
18	10
6	10
40	8
13	8
27	8
19	8
14	6
34	6
23	6
35	6
4	6
22	6
44	6
1	6
41	6

→ Investor Metrics:

**VI) User Engagement:**

**INPUT:**

```
select b.user_id,avg(a.id) from users as a  
left join photos as b  
on a.id=b.user_id  
group by b.user_id
```

**OUTPUT:**

	user_id	avg(a.id)
▶	1	1.0000
	2	2.0000
	3	3.0000
	4	4.0000
	NULL	130.6270
	6	6.0000
	8	8.0000
	9	9.0000
	10	10.0000
	11	11.0000
	12	12.0000
	13	13.0000
	15	15.0000
	16	16.0000
	17	17.0000

INPUT:

```
select count(b.image_url) / count(a.id) as
avg1 from users as a
left join photos as b
on a.id=b.user_id
```

OUTPUT:

	avg1
▶	0.9081

## VII) Bots & Fake Accounts:

INPUT:

```
select user_id, count(photo_id) as cnt_likes from likes
group by user_id
order by cnt_likes desc;
```

## OUTPUT:

	user_id	cnt_likes
▶	21	257
	71	257
	5	257
	66	257
	41	257
	14	257
	57	257
	24	257
	76	257
	75	257
	54	257
	91	257
	36	257
	16	103
	96	98
	69	97
	65	96
	2	94
	26	94

## INPUT:

```
create table fake_id
select user_id, count(photo_id) as cnt_likes from likes
group by user_id
order by cnt_likes desc;
```

## INPUT:

```
select count(*)from fake_id
where cnt_likes= '257'
```

## OUTPUT:

	count(*)
▶	13

