Description: The project is about tracking and analysing users' behaviour on Instagram.

Through this analysis, we will understand user behaviour and the engagement with the software, which will eventually help us to launch a new marketing campaign, decide on features to build for an app, track the success of the app by measuring user engagement.

The detailed analysis will help in finding everything right from most loyal users of Instagram to the best hashtags to finding the fake accounts on Instagram and many more related things.

Approach: The main objective is to understand user behaviour via analysis. To do this i analysed the data and concluded that certain optimisations can be done in product to tailor customer needs.

Tech stack used: I have used is db fiddle.com: MySQL v5.7 for analysis.

Report:

1) Rewarding Most loyal users:

SELECT * from users

order by created_at

LIMIT 5;

id	username	created_at
80	Darby_Herzog	2016-05-06 00:14:21
67	Emilio_Bernier52	2016-05-06 13:04:30
63	Elenor88	2016-05-08 01:30:41
95	Nicole71	2016-05-09 17:30:22
38	Jordyn.Jacobson2	2016-05-14 07:56:26

2) Remind Inactive users to start posting:

SELECT users.id,users.username,users.created_at

FROM users

LEFT JOIN photos

ON users.id = photos.user_id

WHERE photos.id IS NULL;

id	username	created_at
5	Aniya_Hackett	2016-12-07 01:04:39
7	Kasandra_Homenick	2016-12-12 06:50:08
14	Jaclyn81	2017-02-06 23:29:16
21	Rocio33	2017-01-23 11:51:15
24	Maxwell Halvorson	2017-04-18 02:32:44
25	Tierra.Trantow	2016-10-03 12:49:21
34	Pearl7	2016-07-08 21:42:01
36	Ollie_Ledner37	2016-08-04 15:42:20
41	Mckenna17	2016-07-17 17:25:45
45	David.Osinski47	2017-02-05 21:23:37
49	Morgan.Kassulke	2016-10-30 12:42:31
53	Linnea59	2017-02-07 07:49:34
54	Duane60	2016-12-21 04:43:38
57	Julien_Schmidt	2017-02-02 23:12:48
66	Mike Auer39	2016-07-01 17:36:15
68	Franco_Keebler64	2016-11-13 20:09:27
71	Nia_Haag	2016-05-14 15:38:50
74	Hulda.Macejkovic	2017-01-25 17:17:28
75	Leslie67	2016-09-21 05:14:01
76	Janelle.Nikolaus81	2016-07-21 09:26:09
80	Darby_Herzog	2016-05-06 00:14:21
81	Esther.Zulauf61	2017-01-14 17:02:34
83	Bartholome Bernhard	2016-11-06 02:31:23
89	Jessyca_West	2016-09-14 23:47:05
90	Esmeralda.Mraz57	2017-03-03 11:52:27
91	Bethany20	2016-08-03 23:31:53

3) Declaring contest winner:

```
SELECT users.username,likes.photo_id,photos.image_url,count(*)as total_likes from likes join photos on photos.id=likes.photo_id join users on users.id=likes.photo_id group by photos.id order by total_likes DESC LIMIT 1;
```



4) Hashtag Researching:

SELECT tags.tag_name,count (tag_name)as total_tags from tags join photo_tags on tags.id=photo_tags.tag_id group by tag_name

LIMIT 5;



5) Launch Ad campaign

SELECT DAYNAME (created_at) AS Week_day

COUNT(*) AS total_count

FROM users

GROUP by Week_day

ORDER by total_count DESC;

Query #1 Execution time: 1ms			
Week_day	total_count		
Thursday	16		
Sunday	16		
Friday	15		
Tuesday	14		
Monday	14		
Wednesday	13		
Saturday	12		

Investor metrics:

1) User Engagement: SELECT ROUND ((select Count(*) from photos) /(select Count(*) from users),2);



2) Bot and Fake accounts-

SELECT username,

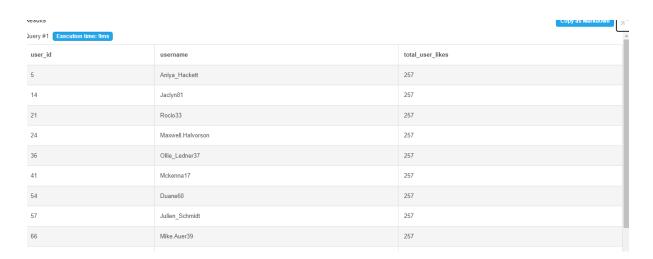
Count(*) AS total_user_likes FROM users

INNER JOIN likes

ON users.id = likes.user_id

GROUP BY likes.user_id

HAVING total_user_likes = (SELECT Count(*) FROM photos);



6) Insights: With this detailed analysis we were able to gain insights into users' engagement and interaction with the Instagram software. This will help in optimizing and creating the better product as per user needs and which is right fit for market. Also, this will help us in creating offers and content as per the customers' requirements which will help in gaining customers loyalty.

Results: Overall this project has helped in learning analysis in more depth and personally me in improving problem solving and sql coding skills.