Exploratory Data Analysis on Facebook Data

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Problem Statement

- Facebook is the most widely used **social media platform** in the world

- While the site was originally created to **connect individuals** with similar interests, today, businesses, nonprofit organizations & communities, and public figures all use the site for network connections, information sharing and even marketing of products & services.

- To carry **analysis** of random dataset from Facebook to find patterns about gender-based and age group-wise affiliations towards Facebook as social networking site.

- To find the a **correlation between parameters** and deriving useful insights about data.

Proportion of users based on gender

Pie chart showing the proportion of User profiles for each gender
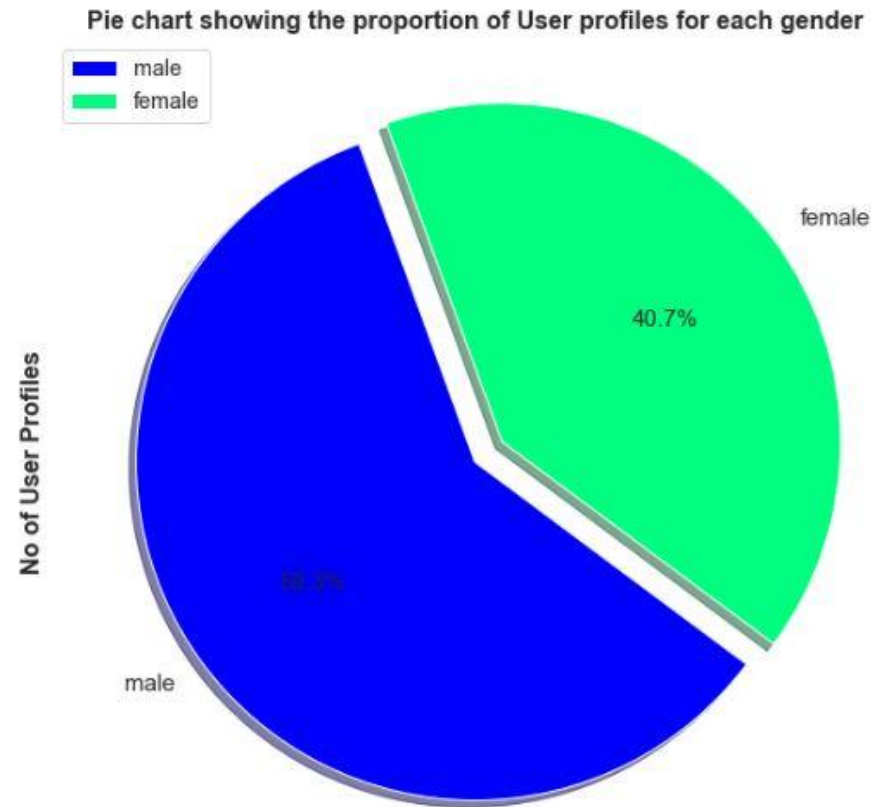
- Above pie chart clearly indicates that there are almost 59% of male users and close to 41% of female user profiles on facebook

Distribution of users by Gender and Age group

**Facebook User Distribution by Age Group and Gender**
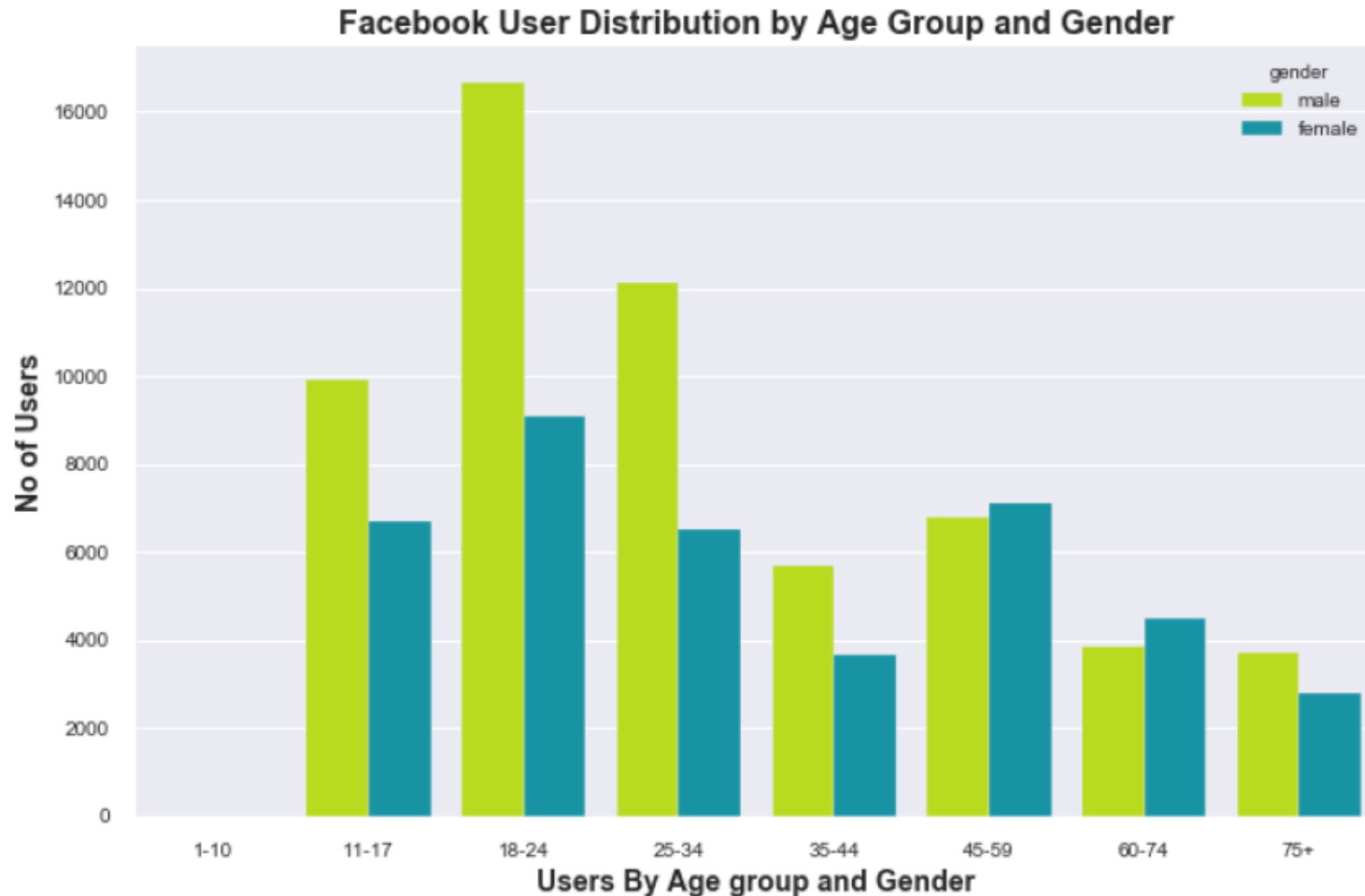
- Each age group has higher male user base than female users till age group of 35-44. After that the trend reverses
- Age group of 75+ people again has more male users compared to female users.
- Highest number of Female and Male users come from 18-24 age group category

# Distribution of users by Tenure group and Gender
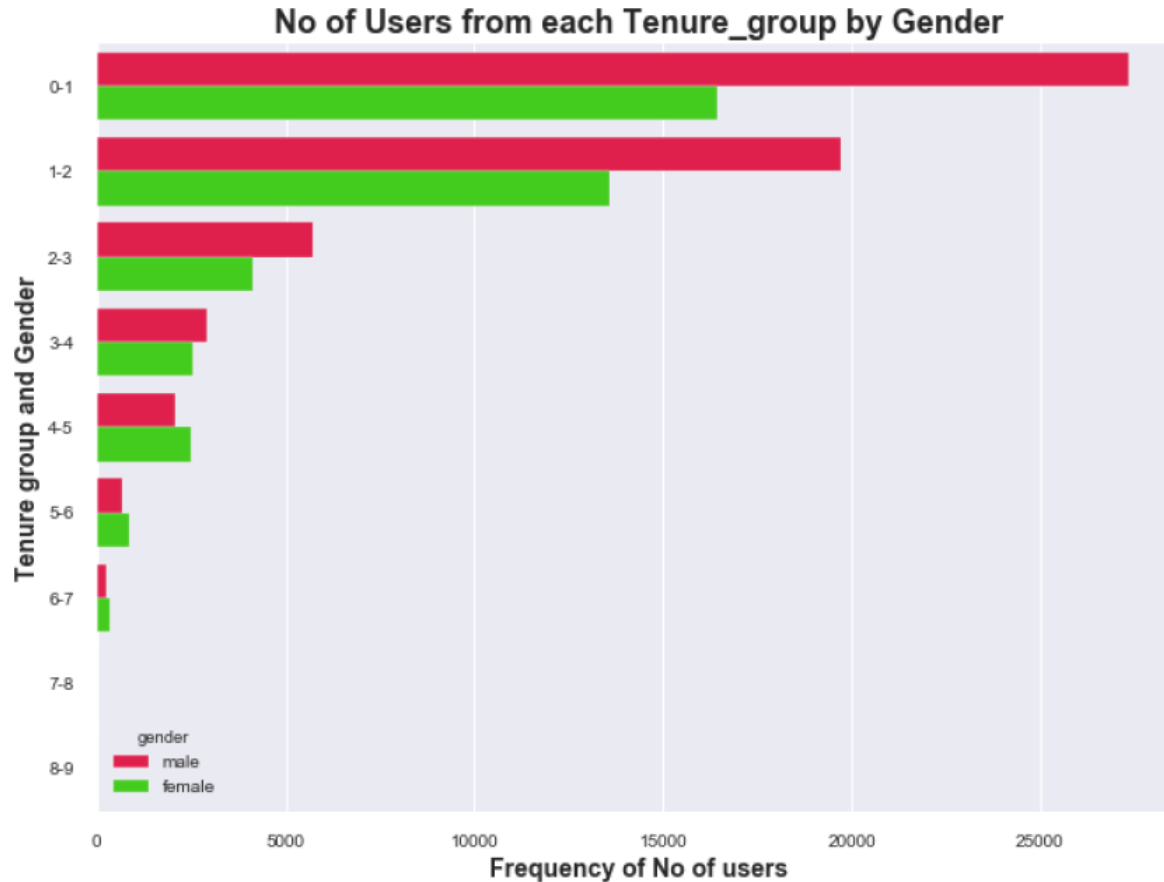
- Maximum tenure for which users stay on facebook is between 0-2 years.
- This is one of the issues facebook need to look at, i.e. How to make users stay with facebook for a longer duration
- There are more male users than female users in majority of tenure groups except a few cases

Friend Counts and Likes received age-group wise



Friend Counts and likes received by age group
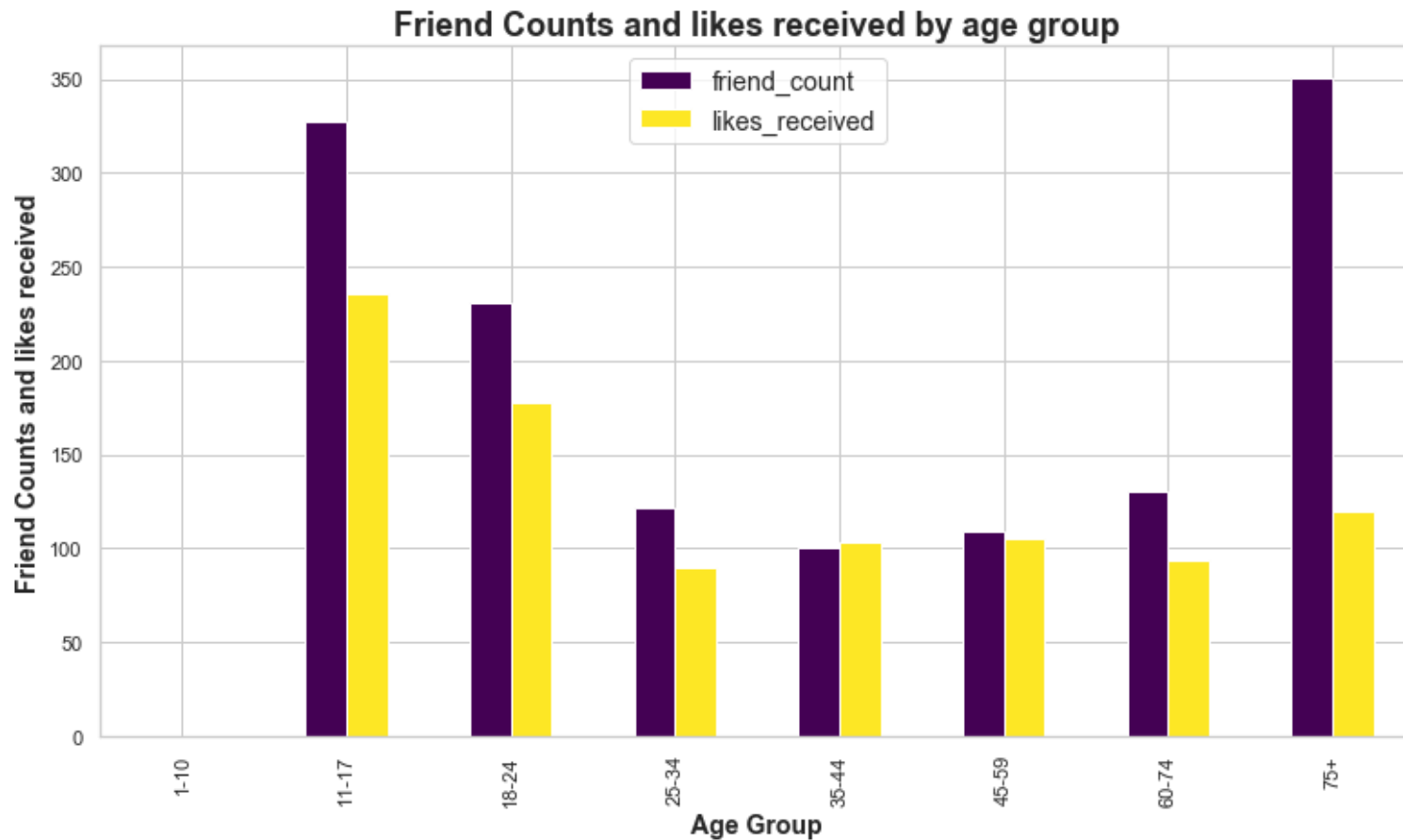
- Average Friend counts are highest in '11-17' and '75+' age groups, whereas these numbers decline in the middle age groups
- Number of likes received are higher for younger users whereas same declines as the age increases

Trend between likes received from mobile app and from internet

Scatter plot showing the variation of mobile_likes_received and www_likes_received for each gender
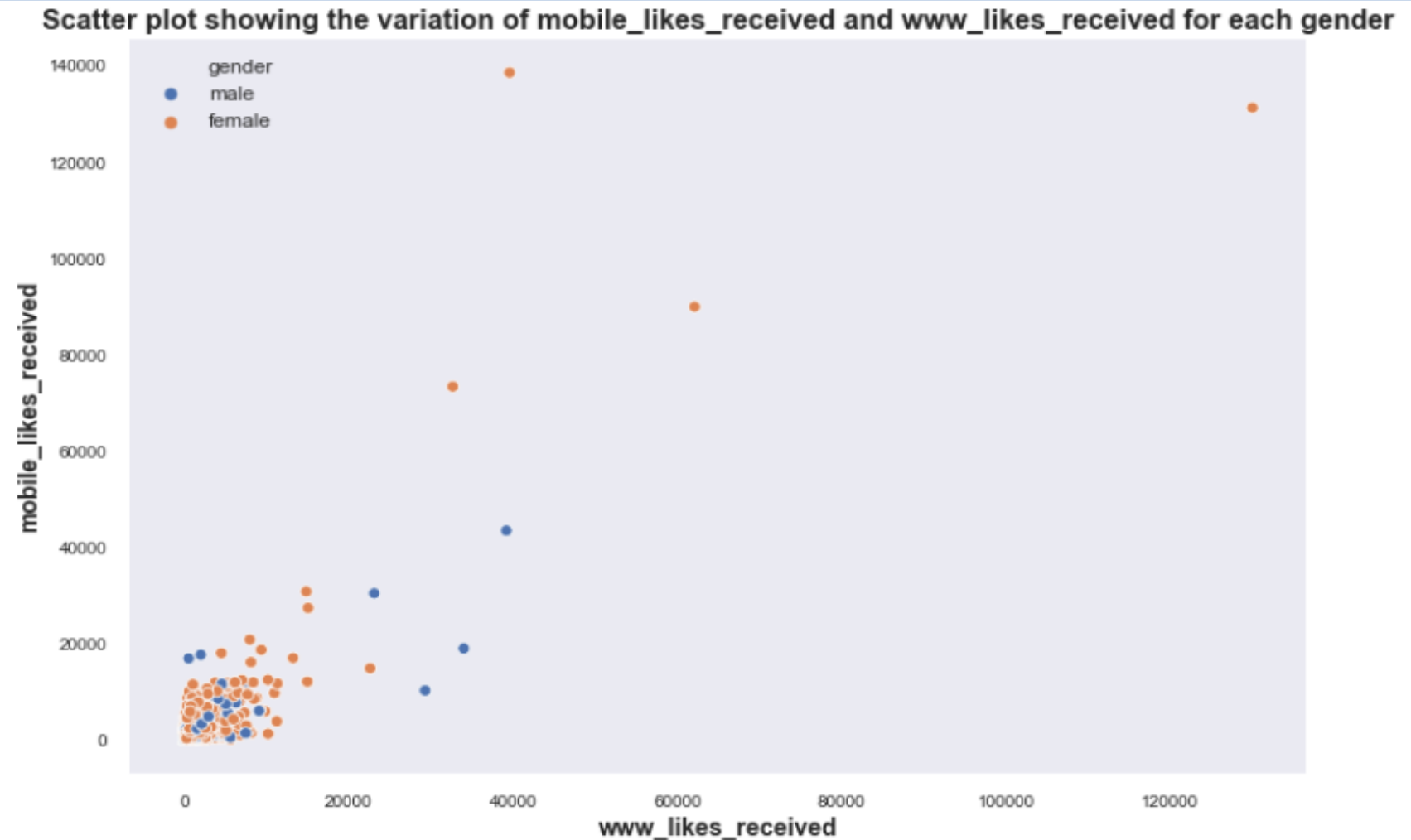
- Maximum abundance of likes received is for female account holders, as we see that there is majority of orange dots in above visualization

Friendships_initiated Vs Gender


Friendships initiated by Gender
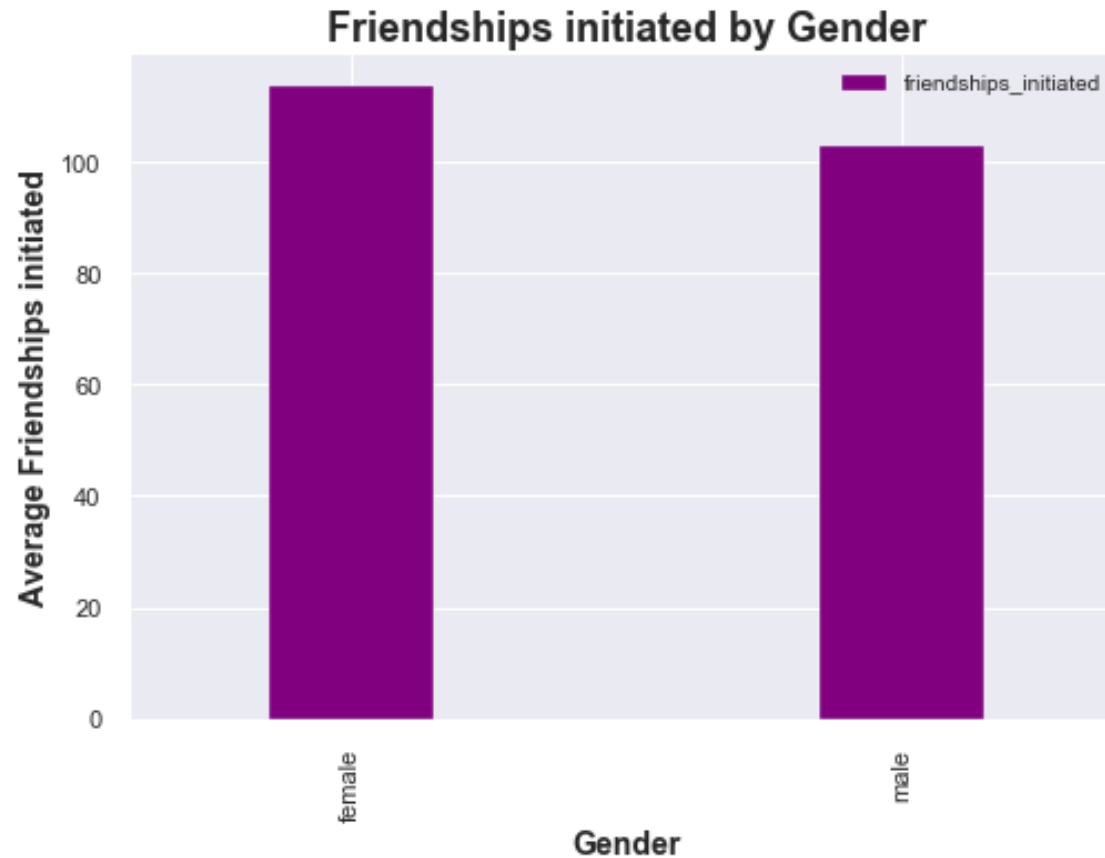
- Average friend requests initiated are coming from female users account, making them more active on the platform

Which is the most popular medium - Mobile or Web

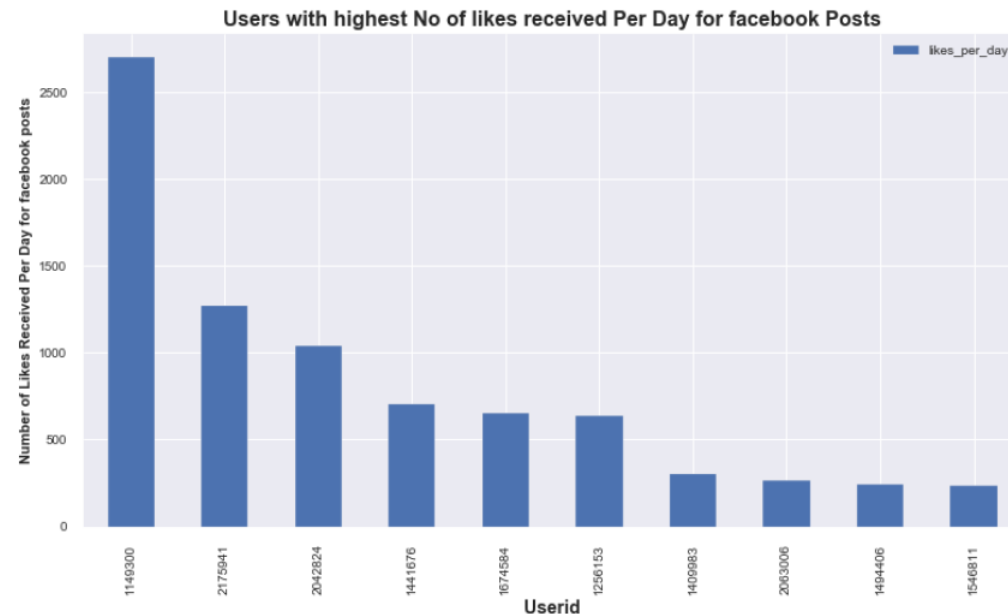Comparison of Mobile and Web Likes by Age group
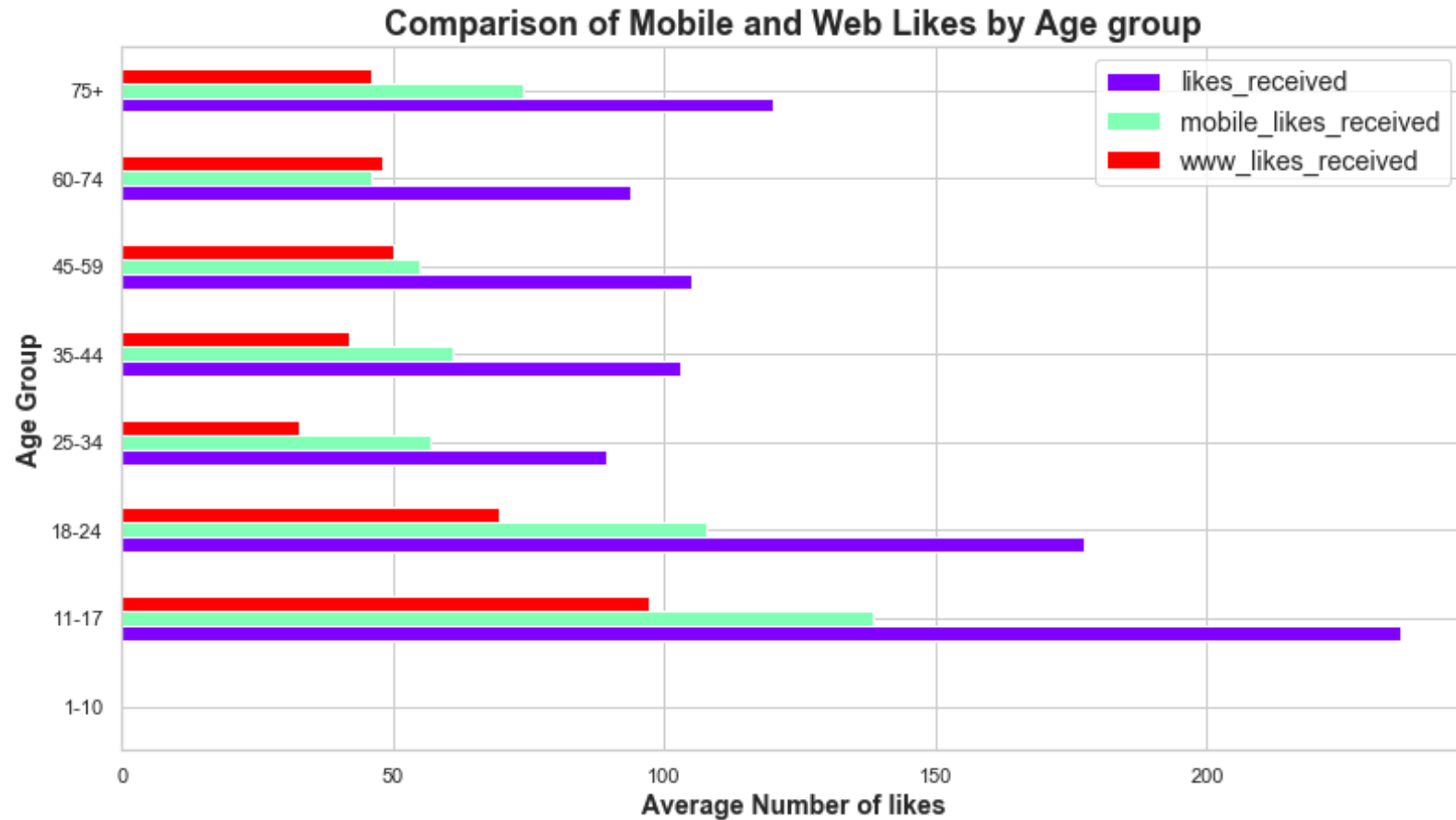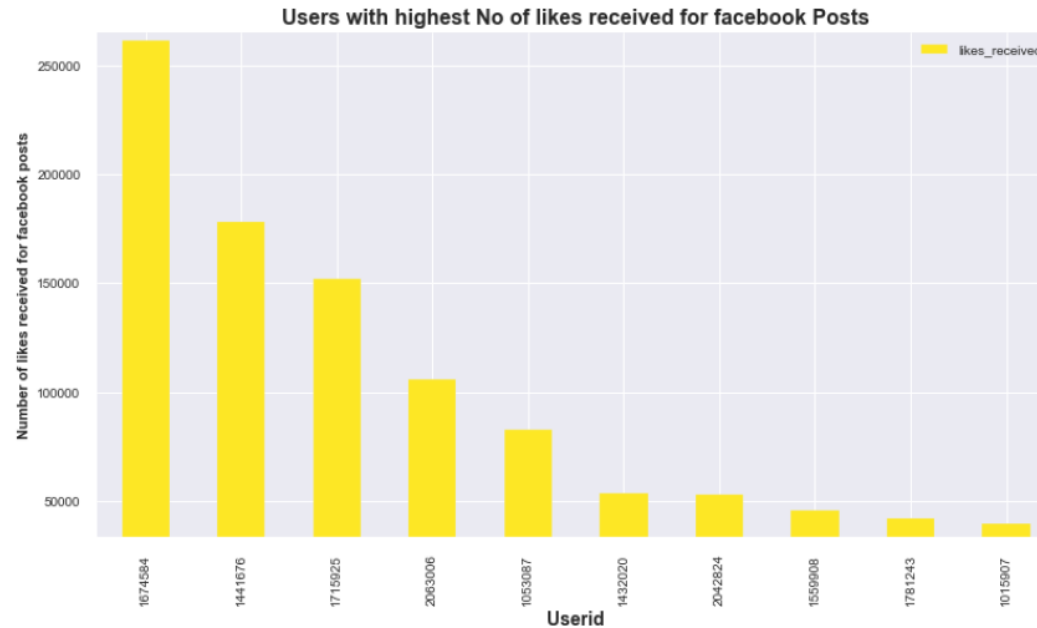
- Average likes received to the users are from mobile apps and then web. So apps are more popular among the users

Top 10 users by friendships initiated & friend counts

Top 10 users based upon highest friendships initiated

Users with highest No of Facebook Friends
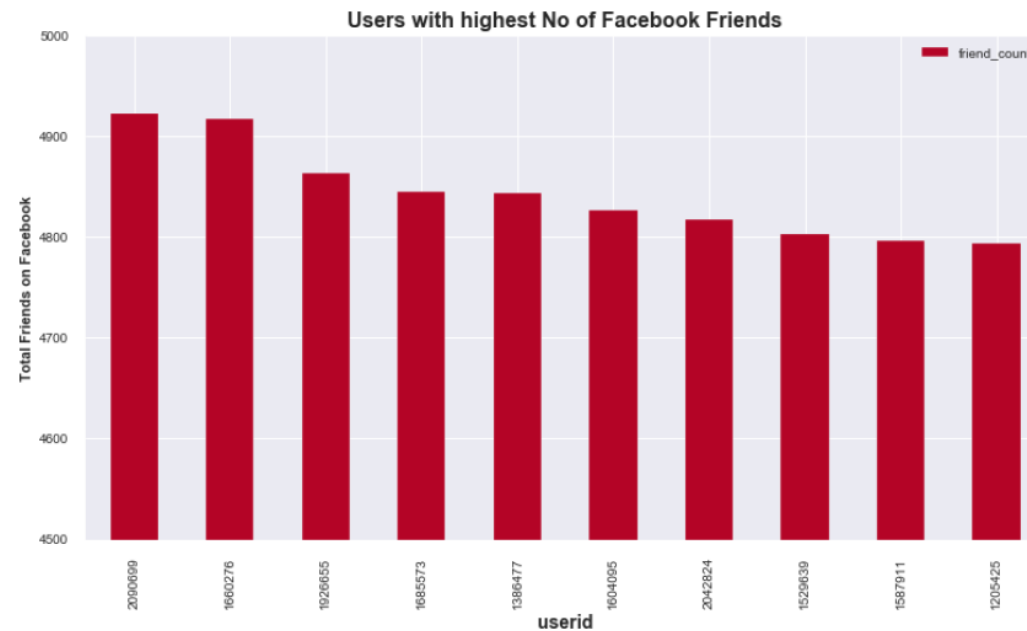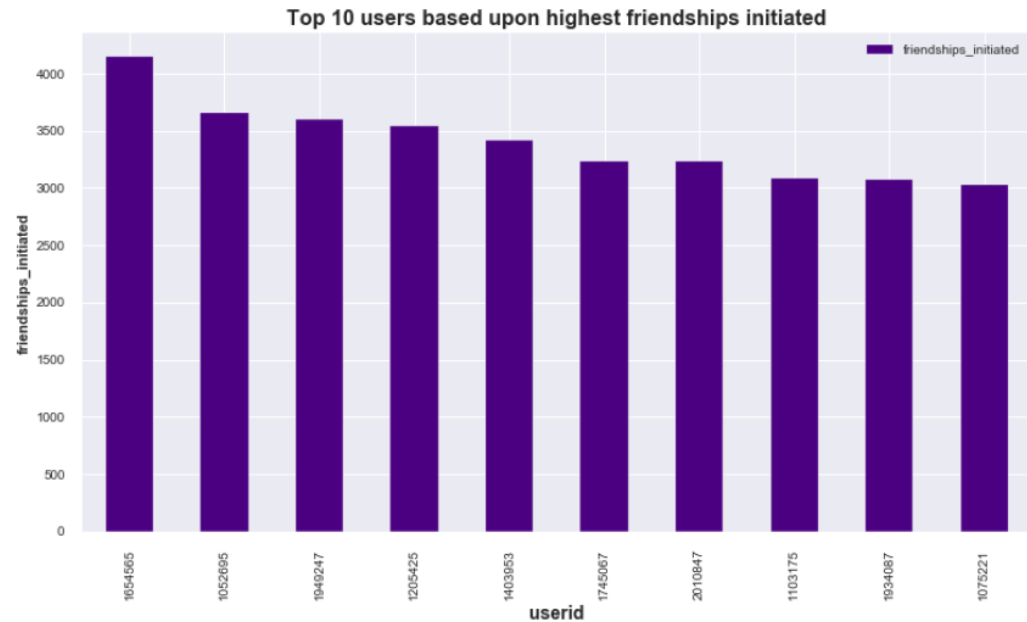
- Facebook may target these active users for generating more profit and marketing the products of businesses

Top 10 users based on highest likes received overall & max likes per day

Users with highest No of likes received for facebook Posts

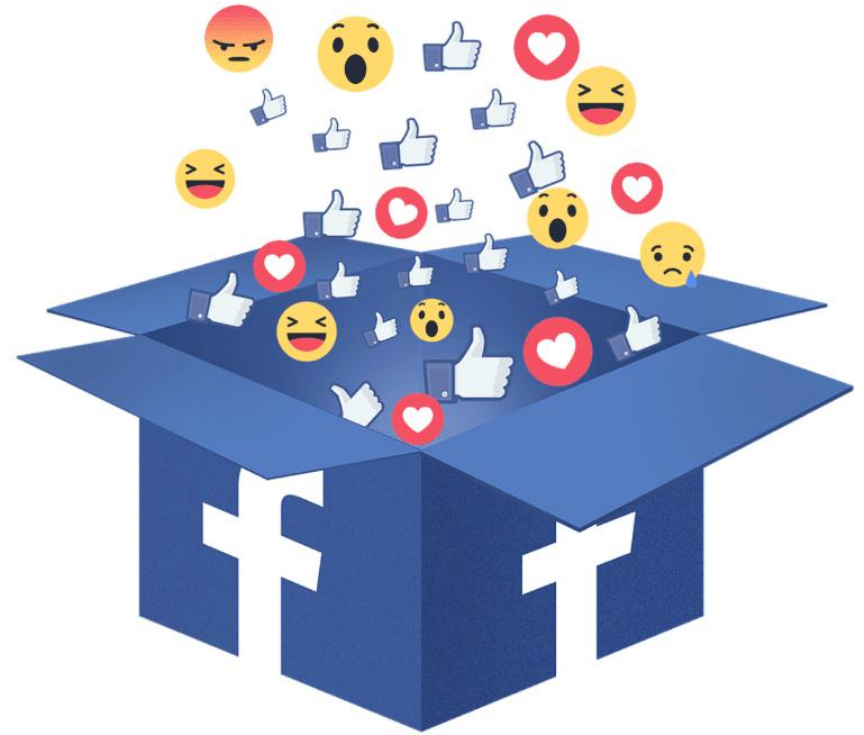Users with highest No of likes received Per Day for facebook Posts

- Facebook may target these active users for generating more profit

- Facebook may also offer earning opportunity to these members by making an offer to share sponsor advertisements with their friends

Conclusion

- Overall people from the age group **of 11-17, 18-24 and 25-34** are the most active people on the facebook platform.

- **Maximum** tenure of users on platform is **0-2 years**, and those are the most active profiles in terms of likes, friend requests.

- Female users have more number of friends than Men. Also females are found among the profiles with highest activity in terms of sending friend requests, likes giving/receiving

- Usage of the facebook is more on the **mobile platform** compared to web. This is proved by comparing likes received and mobile-likes-received and www-likes-received.

Actionable Insights :

1. Make the **versatile** and user friendly **mobile app** for attracting and making people spend more time on facebook.

2. Target profiles with maximum activity on platform for **advertising and marketing purpose**

- Facebook may also offer **earning opportunity** to these members by making an offer to share **sponsor advertisements** with their friends

- Facebook can start approaching these active users by **sharing freebies** as well as readymade customized collages / collection of top photos / videos, which these users can share with their friends

- Finally, these users can also become **beta users**, which can give feedback to Facebook related to site compatibility/bugs and get **rewards**

THANK YOU…!!!