# Time Series Report

Executive Summary

This report outlines patterns in daily ad impressions over June 2019. By tracking how often ads were seen each day, I identified key usage trends that can help shape smarter advertising strategies.
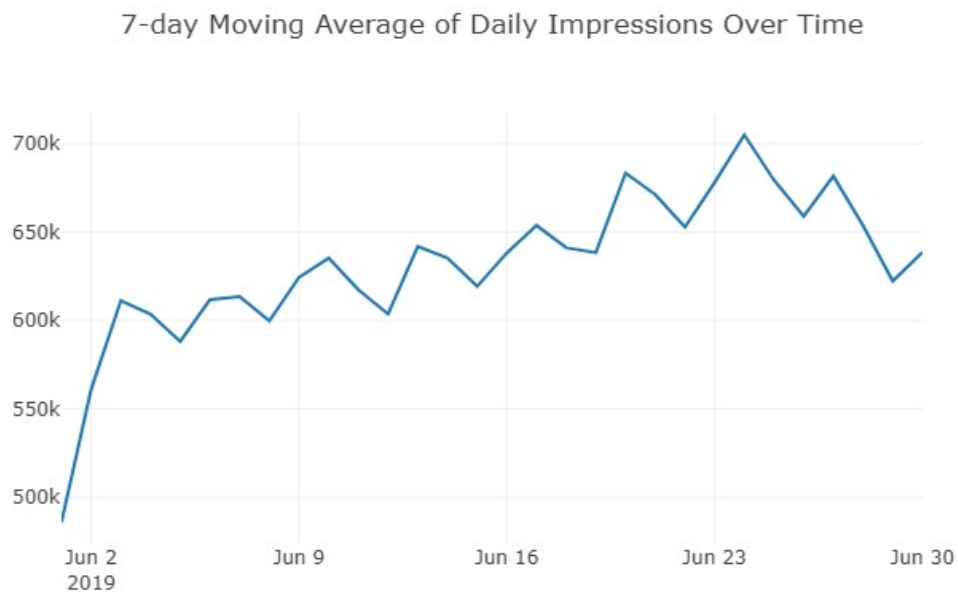
Total Impressions over time

In this analysis, I added up each day's ad impressions to see how engagement fluctuated over time. Days of the week were also considered to check for any regular weekly trends.

Insights

The plot below shows daily ad impressions from June 1, 2019, to June 30, 2019. The graph depicts fluctuations in daily impressions. Particularly, Monday and Thursday usually receive high impressions, while Wednesday and Saturday have notably lower ones. The peak impression count is on June 24th, with 868,456 impressions, whereas the lowest is on June 26th, with 459,984 impressions. Overall, the graph indicates a relatively stable pattern of daily impressions throughout the month.

Daily Impressions Over Time
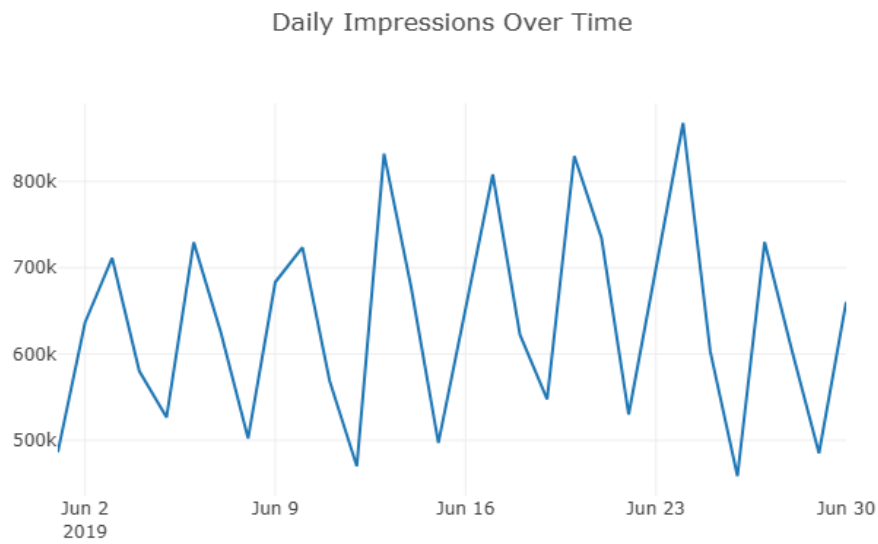
This graph represents the daily aggregated total impressions in Jun 2019

7-day Moving Average of Daily Impressions Over Time

This

This graph represents the 7 days moving average of total impressions in Jun 2019

date	day_of_week	daily_impressions	7-Day Moving Avg
2019-06-01	Saturday	486756	486048.0
2019-06-02	Sunday	636942	561164.0
2019-06-03	Monday	712014	611217.3333333334
2019-06-04	Tuesday	581034	603463.0
2019-06-05	Wednesday	527132	588080.8
2019-06-06	Thursday	730188	611649.3333333334
2019-06-07	Friday	625676	613543.7142857143
2019-06-08	Saturday	502832	599623.25
2019-06-09	Sunday	684146	624288.5
2019-06-10	Monday	724370	635200.5
2019-06-11	Tuesday	569628	617397.25
2019-06-12	Wednesday	470680	603617.25

2019-06-13	Thursday	833022	641824.25
2019-06-14	Friday	677686	635277.5
2019-06-15	Saturday	497594	619289.75
2019-06-16	Sunday	653302	638090.75
2019-06-17	Monday	808914	653673.5
2019-06-18	Tuesday	622966	641019.25
2019-06-19	Wednesday	548096	638344.5
2019-06-20	Thursday	830122	683287.5
2019-06-21	Friday	735234	671092.0
2019-06-22	Saturday	530834	652709.25
2019-06-23	Sunday	699762	677984.25
2019-06-24	Monday	868456	704888.75
2019-06-25	Tuesday	603788	679269.5

2019-06-26	Wednesday	459094	658793.0
2019-06-27	Thursday	730416	681583.5
2019-06-28	Friday	605188	653455.25
2019-06-29	Saturday	485656	622260.0
2019-06-30	Sunday	661244	638549.0

This table represents the aggregated total impressions for each day and the corresponding day of the week.

Recommendations

Here are a few suggestions based on the insights:

- Optimize the higher traffic days such as Mondays and Thursdays by planning significant content or launching important advertising campaigns to capitalize on the greater number of impressions.
- Be cautious that weekends may not always bring the most traffic. It's important to tailor the strategies for Saturdays and Sundays differently.
- Investigate the reasons behind the peak impressions on June 24th and the low on June 26th to replicate this success on similar future dates.
- The stability in the graph indicates that there is a consistently engaged audience. It's beneficial to keep posting regularly to continuously attract this audience.
- On days with fewer impressions, consider trying different types of content to stimulate interest.