

## Business Analytics Project 1

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The D.C. bike share dataset offers insights into when and under what conditions people rented bikes through a bike share program in 2011 and 2012. Within this dataset, the distribution of the number of registered riders is right skewed, meaning that it is more common to see low registered rider counts than medium or high registered rider counts (Figure 1). This is an indication that there is an opportunity to increase the levels of registered riders with strategic bike share program changes.

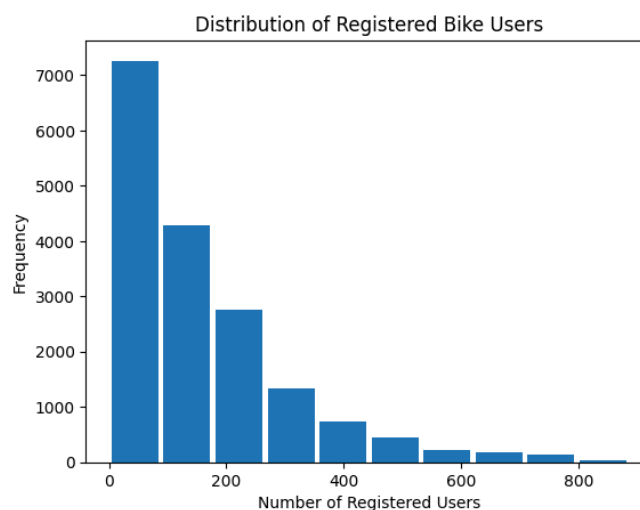


Figure 1

The data shows that the median number of registered riders was highest on weekdays, with a gradual increase from Monday to Friday (Figure 2). However, the median number of casual riders was highest on the weekends and with a slump on Wednesday (Figure 3). Incentives for registered riders could be implemented on the weekends to increase the number of registered riders who use the bike share service. Registration could also be incentivized on Mondays and Fridays to further increase the number of riders that register or login to their account before riding.

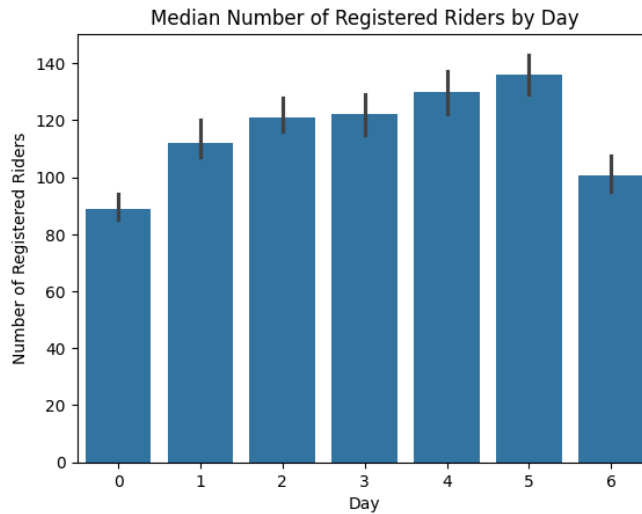


Figure 2

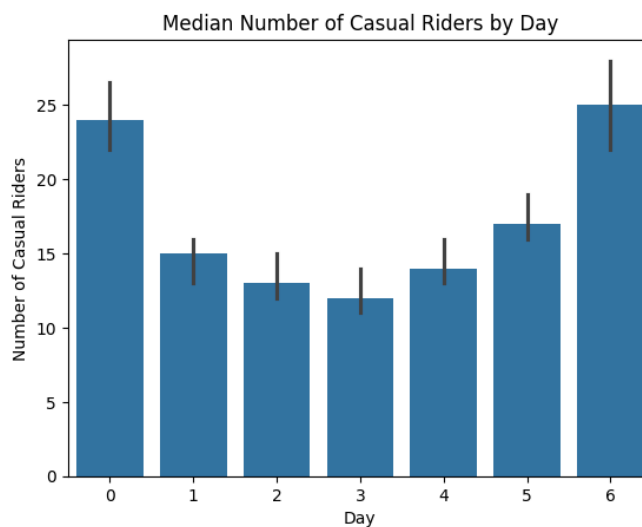


Figure 3

When looking at the median number of registered riders per month we can see that there are more registered riders using the bikes from May through November (Figure 4). The median number of casual riders by month follows a similar pattern, although there is a steeper decline starting in September (Figure 5). There is an opportunity here to incentivize riders from May through August to register or login before riding to increase the number of registered riders.

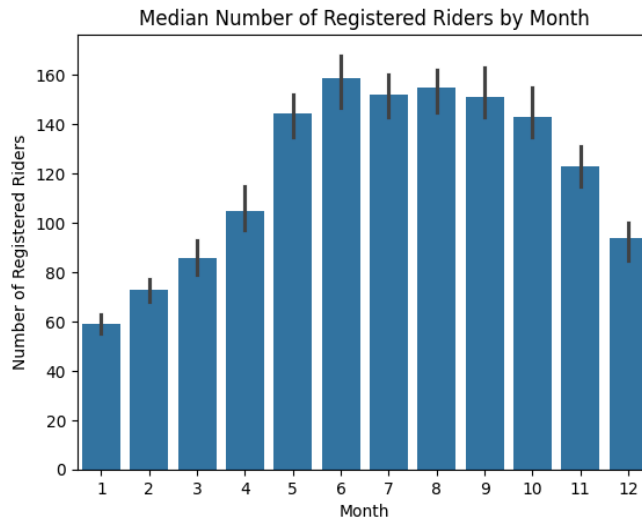


Figure 4

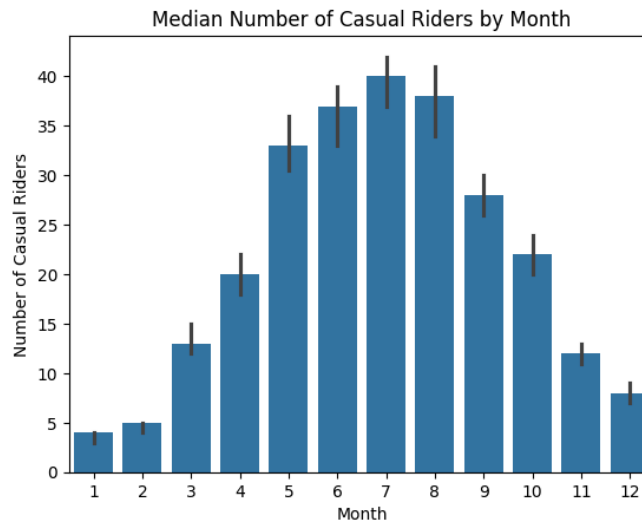


Figure 5

The bike share program has multiple opportunities to increase the number of registered riders using their bikes if they add incentives for users to register at times where casual rider counts are high. By comparing the median number of registered and casual riders over the same time period we can see if ridership is generally low for that time period, or if there is a higher occurrence of casual riders at that time. Incentives such as decreased rental fees or points towards rewards should be offered to registered riders on the weekends and from May to September in order to incentivize casual riders to register. These incentives could be further targeted to casual riders upon registration, rather than being offered to all registered riders. Increased registration would give the bike share company more data on their customers, which could be used to better fit the program to user's needs.