

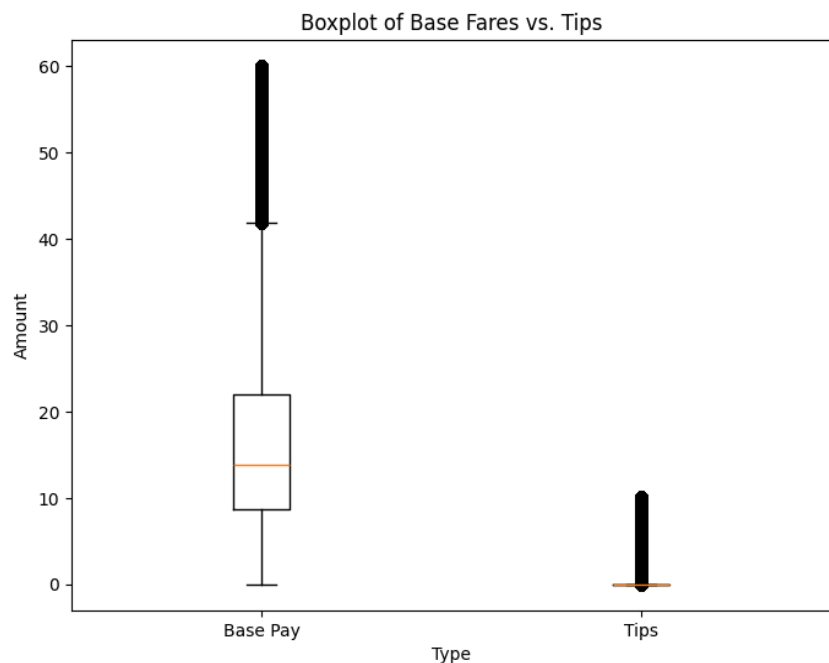
Tip Analysis and Insights for NYC Rideshare Data

The goal of this analysis was to explore the relationships between base pay and tips for rideshare drivers, as well as to determine if there are any significant trends or factors that influence tip amounts. My hypothesis was that tips make up a significant portion of total earnings per trip, and factors such as trip duration, base pay, and time of day influence the amount of tip received.

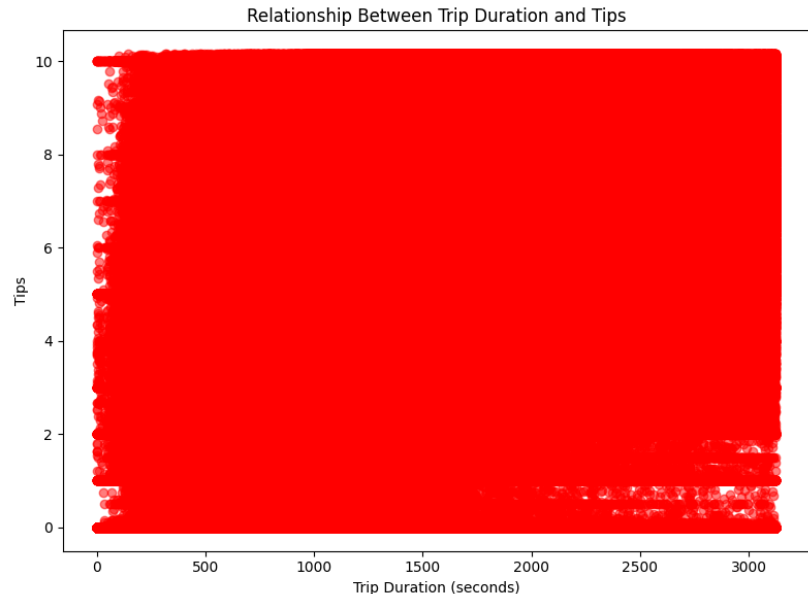
The average base pay per trip is approximately **\$16.48**. On average, drivers receive **\$0.76** in tips per trip. The total average earnings per trip, which includes both base pay and tips, is about **\$17.25**. Tips contribute around **4.4%** of the total earnings per trip, indicating that while tips are a part of the overall earnings, they do not make up the majority of drivers' income. While tips are important, the bulk of earnings come from the base pay, with tips providing a very small supplementary income.

The box plot compares base pays (driver pay before tips) and tips. The median base pay is around **\$14**, as indicated by the orange line in the middle of the box. There are many outliers (shown as the black dots), which are above **\$45**. The median tip is significantly lower than the median base pay, around **\$1**, as seen from the position of the orange line for tips. Tips are much smaller than base pays on average.

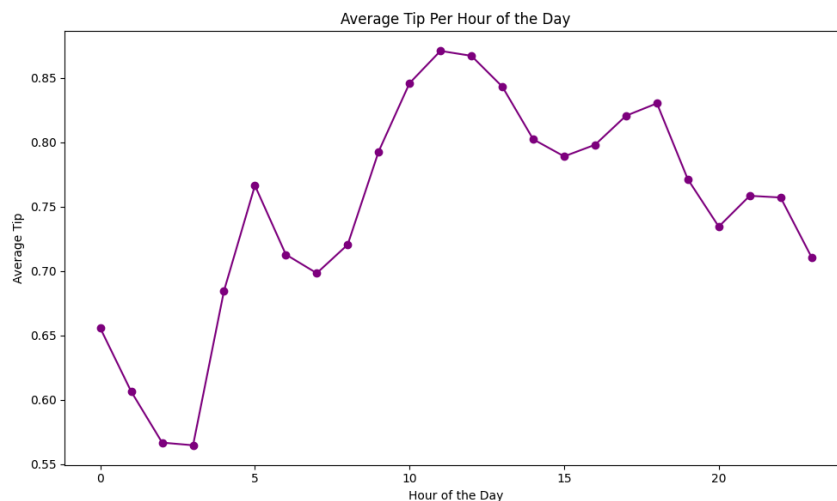
The interquartile range for tips is extremely narrow, indicating that most trips receive tips around **\$0 to \$2**. Like base pay, there are also outliers for tips, but these are generally much lower in magnitude compared to base pay outliers. The highest tip in the dataset is just above **\$10**, showing that there are a few high-tipping trips, but they are a lot less common than low-tipping trips. Almost all trips have very low tip amounts, with a concentration of values near zero, meaning that most trips do not receive significant tips. The plot clearly shows that most passengers provide only a small tip relative to the base pay.



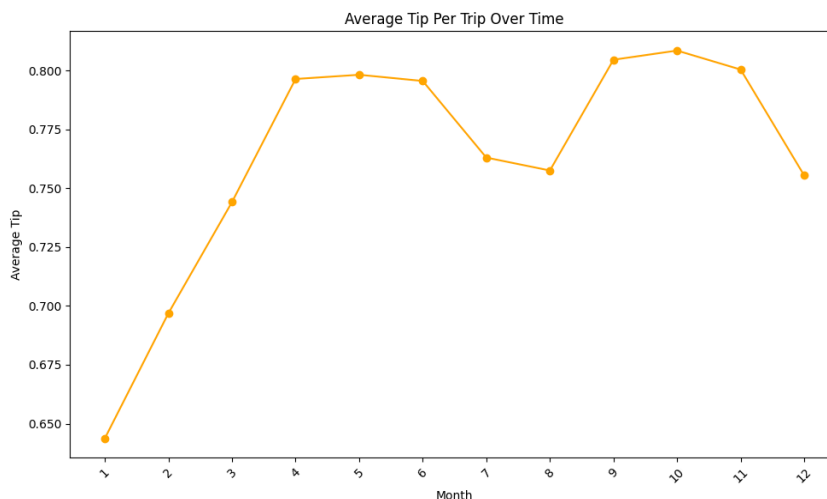
The scatter plot showing the relationship between trip duration and tips does not reveal a correlation between the two. The x-axis (trip duration) extends from **0 to 3,000 seconds** (approximately 50 minutes). This plot shows that tips are extremely scattered, and there does not seem to be a correlation between trip duration and tips.



Tips do vary by time of day and month. Tips are higher during peak hours and specific months. For time of day, the main peak of tipping occurs around lunch time (**10 am to 1 pm**). The second peak occurs during rush hour,



when people are leaving work (**5 pm to 6 pm**). For time of year, there were two peaks for tipping, with the first being from **April to June**, and the second being from **September to November**. These months fall into the seasons of spring and autumn, when weather is milder and people are more likely to be out.



Overall, the data reveals that while tips do not make up a significant portion of total earnings for drivers, their variability is influenced by time of day and time of year. However, other factors such as the base pay for a trip and trip duration do not play a significant role in the amount of tips a driver receives.