

Analysis based on the City biking in New York in the years of 2014 & 2015

Overview:

This analysis visualizes bike trips in New York City during 2014 and 2015, highlighting key trends in station usage, rider demographics, and trip patterns.

Start and End Stations:

- **Start Stations:** Larger, greener dots indicate stations with the highest number of bike trips, typically found in high-traffic areas like transportation hubs and tourist spots.
- **End Stations:** Similarly, larger, greener dots represent the most popular destinations where bike trips ended while smaller and red dots represent the least popular destinations.
- **Geographic Patterns:** Maps reveal a dense concentration of bike stations in lower Manhattan, with expansion into Jersey City and upper Manhattan in 2015 compared to 2014.
Decision: High-use areas should be prioritized for bike availability and expansion. Comparing start and end stations highlights common commuting routes, enabling better planning for bike rebalancing.

Rider Demographics and Usage Trends:

- **Subscriber vs. Customer:** Subscribers consistently use bikes more than casual customers. Male riders outnumber female riders in both years, with a slight decline in female ridership in 2015.
- **Age Trends:** The most active age group shifted from 30-36 years in 2014 to 26-33 years in 2015.
Decision: Promotional efforts should target male riders while encouraging female participation. Marketing campaigns could focus on the growing younger demographic.

Trip Duration and Time of Day Patterns:

- **Peak Hours:** Bike trips consistently peak around 6 PM in both summer and winter, with slight shifts in timing from 2014 to 2015.
Decision: Increase bike availability during peak evening hours to accommodate higher demand.
- **Trip Duration:** June 2015 saw the largest increase in trip duration (+400 minutes), while August and September saw shorter trips compared to 2014.
Decision: The spike in June suggests an increased demand for longer rides, possibly due to favourable conditions. Shorter trips in September may indicate a shift in user behaviour or external factors, warranting further investigation.

