2.7: Final Presentation

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Streamlit link: https://citibike-vdy8tnlhsdgxm9xbjxucgs.streamlit.app/

Youtube presentation: https://youtu.be/JBHalPsQw0Y

Insights & Recommendations

Key Insights:

1. **High Activity in the City Core:** The city center and areas near Central Park experience the highest levels of activity.
2. **Regional Links:** Strong travel connections link Manhattan to Jersey City and Brooklyn.
3. **Key Stations:** Some stations see significantly higher usage, with trip counts exceeding 900, as indicated by the color intensity.
4. **Uneven Activity:** Northern Manhattan and outer areas show reduced levels of usage.
5. **Targeted Analysis:** The filters effectively highlight high-demand routes and stations.

Line chart:

Key Insights from the Chart:

1. **Weather Influence:** Bike usage rises during warmer months (May–October) and decreases in colder months, reflecting temperature variations.
2. **Seasonal Demand Fluctuations:** The surge in demand during warmer months likely results in bike shortages, which aligns with customer complaints.
3. **Redistribution Shortcomings:** Current bike management practices may not effectively handle demand spikes during peak seasons.
4. **Critical Period:** Bike shortages are most significant in the warmer months, calling for focused solutions during this time.

Bar chart:

Key Observations from the Chart:

1. Popular Stations: The top three stations—W 21 St & 6 Ave, West St &

Chambers St, and Broadway & W 58 St—account for the highest number of bike

trips, indicating their critical importance.

2. Uneven Utilization: There is a very obvious gap between the most and least popular stations

in the top 20, suggesting offering a 10% discount coupon for the next ride when returning the bike at a not popular station.

3. Strategy Based on Demand: High-traffic stations are likely to face shortages during peak times due to increased trip demand. Maintaining sufficient bike availability at these locations is crucial.

4. Cross-Referencing: These findings align with insights from the interactive map,

further emphasizing the importance of high-demand stations in Manhattan.

Insights:

• Expand infrastructure in high-demand areas.

• Address low activity in underperforming regions.

• Optimize station placement and marketing in key zones.

Correlation: These results align with the interactive map's insights, highlighting the critical role of high-demand stations in city center.

Insights:

• Increase bike availability at busy stations.
• Encourage usage in underutilized areas with a special campaigns and promotions.
• Improve station placement and targeted promotions in key locations.

Conclusion:

The analysis identifies crucial factors contributing to bike shortages and inconsistent usage across Citi Bike stations:

1. **Seasonal Changes:** Bike usage increases during warmer months (May–October) and drops significantly during colder months due to temperature fluctuations. This seasonal demand surge likely causes complaints about bike unavailability.
2. **Popular Stations:** Certain stations in central and lower Manhattan, such as W 21 St & 6 Ave, West St & Chambers St, and Broadway & W 58 St, experience higher usage. However, this high concentration of activity leads to imbalances between supply and demand.
3. **Regional Disparities:** Areas like city center and islands show higher usage, pointing the areas and stations that needed to be fortified for the demand.
4. **Regional Links:** The significant travel connections between Manhattan, Jersey City, and Brooklyn highlight the need for improved bike station placement and better management across these key areas.
5. **Imbalances in Redistribution**: Existing operational strategies may not effectively accommodate fluctuations in demand, particularly during peak seasons and at high-traffic stations.