# NYC Yellow Taxi – KPI Visualizations & Insights

## 1. Total Passengers – 30M

Visualization: KPI Card / Big Number

Insights:

- Over 30 million passengers served between 2019–2021.

- Indicates the massive scale of the taxi system in NYC.

- Sharp decline in 2020–2021 shows COVID-19’s impact on mobility.

## 2. Total Trips – 19M

Visualization: Line Chart (Year-wise trend)

Insights:

- Trips fell drastically:

• 2019 → 11.3M

• 2020 → 5.9M

• 2021 → 2.2M

- This trend highlights how external factors (like pandemic restrictions) directly impact public transport demand.

## 3. Total Revenue – $362.91M

Visualization: Stacked Column Chart (by Fare, Tip, Tolls, Tax)

Breakdown:

- Fare: $248.43M (≈ 68%)

- Tips: $42.17M (≈ 12%)

- Tolls: $6.40M (≈ 2%)

- MTA Tax: $9.57M (≈ 3%)

Insights:

- Majority revenue comes from base fares, followed by tips.

- Tips form a significant portion, showing customer service quality matters.

- Tax & tolls are smaller but essential for government revenue.

## 4. Vendor Contribution

Visualization: Bar/Column Chart

Insights:

- Curb Mobility: 13.0M trips

- Creative Mobile Technologies: 6.4M trips

- Market is dominated by two major vendors.

- Curb Mobility controls almost double the share of Creative Mobile.

- Useful for government/vendor performance comparisons.

## 5. Payment Method

Visualization: Pie Chart

Insights:

- Credit Card → 14.0M trips (≈ 73%)

- Cash → 5.2M trips (≈ 27%)

- Dispute/No Charge → negligible

- NYC passengers prefer digital payments over cash.

- Trend supports the move toward cashless mobility.

## 6. Pickup & Drop-off Zones

Visualization: Top 10 Bar Charts (Pick-up vs Drop-off)

Insights:

- Busiest Pickup Zones: Upper East Side, Times Sq/Theatre District, Penn Station.

- Busiest Drop-off Zones: Upper East Side, Upper West Side, Midtown.

- High activity in commercial hubs + residential zones, showing strong commuter demand.

## 7. Trip Timing (Heatmap by Hour vs Weekday)

Visualization: Heatmap

Insights:

- Peak hours: 8 AM – 6 PM (office commute).

- Weekdays: Higher demand during office hours.

- Weekends: Evening/night rides increase (tourism & nightlife).

- Helps in driver scheduling & surge pricing strategies.

## 8. Distance Buckets

Visualization: Histogram / Bar Chart

Insights:

- Short-distance trips dominate (likely intra-city).

- Longer trips are fewer but contribute more revenue per ride.

- Useful for analyzing urban vs inter-borough travel patterns.