# NYC Green Taxi Dashboard



## Assumptions and cleaning data:

- Findings based on provided data within the specified time range. Dashboard intended for NYC Green Taxi division's operator/higher management for decision-making.
- Primarily analyzed data from December 2018, which constituted 99.98% (685,249 records out 685,370) of the dataset.
- Removed 'ehail_fee' column due to null values and absence in the data dictionary.
- Excluded 3 records with '99' as a rate code, as it wasn't defined in the data dictionary.
- Incorporated NYC TLC's taxi zone lookup data for pickup and drop-off zone names. Data available on the NYC TLC website.
- 1935 (~0.3%) records had a negative value in **fare amount, extra, mta tax, tip amount, toll amount, improvement surcharge**, and hence **total amount**. My approach involves consulting the client about the records, and based on their input, I chose to use absolute values, assuming it was a data glitch during recording. Further investigation is needed to understand why these records had negative values. If the data wasn't validated by the client, alternatives would have included replacing with average values or removing records constituting less than 5%.
- Noted that tip amounts collected in cash were not recorded in the data, impacting total amount.
- Assumed vendors as connection providers responsible for store and forward flag activation.

**For the data dictionary **click here**.

# NYC Green Taxi Dashboard

Date: 01/12/2018 – 31/12/2018

Pick Up Zone: All | Drop Off Zone: All | Vendor ID: All | Trip Type: All | Payment Type: All | Rate Code: All

*Navigate from here ->* Assumptions | Overview | Daily Trend | Trip Type | Additional Analysis | Insights | Clear all slicers

| $11.3M | 685K | 904K | $16.4 | 3.44 | 23 | $4.8 |
|---|---|---|---|---|---|---|
| Total Revenue | Total Trips | Total Passengers Transported | Avg. Trip Revenue | Avg. Trip Dist (miles) | Avg. Trip Time (Mins) | Revenue Per Mile |

## Top 5 PickUp Zones

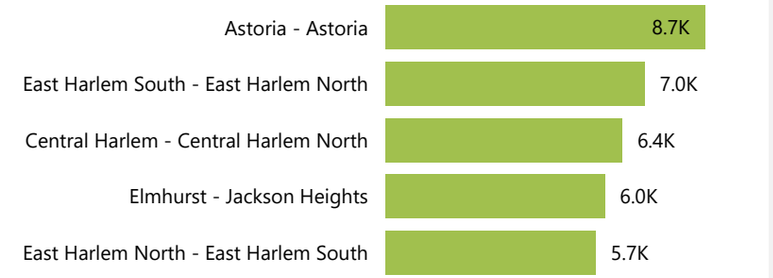
Trips | Revenue


## Top 5 DropOff Zones

Trips | Revenue

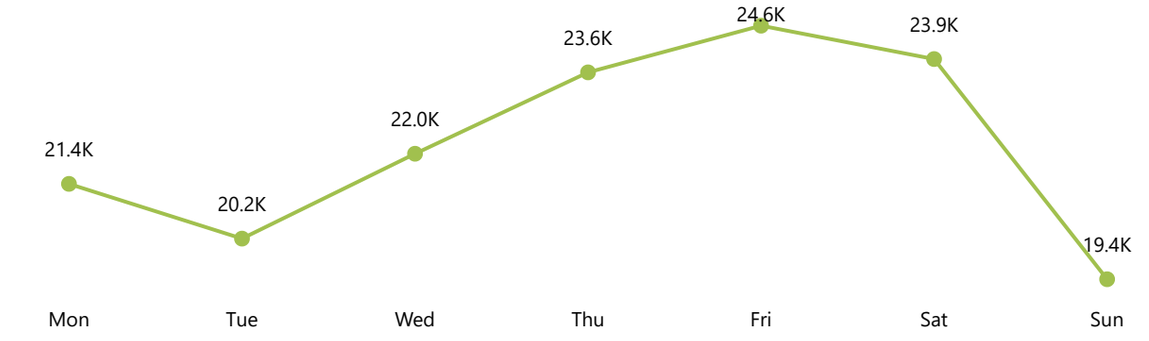

## PickUp -> Drop Off (Top 5)

Trips | Revenue



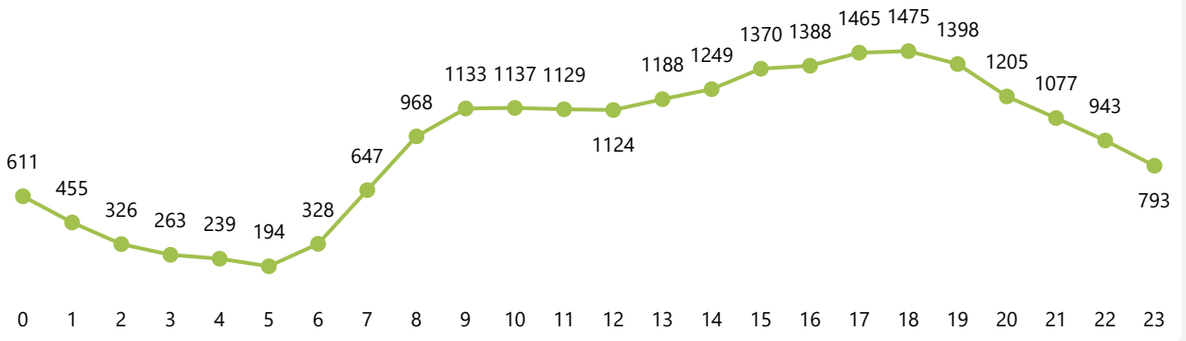

## Trips by Day

Avg. Trips | Total Trips




## Trips by Pick Up Hour

Avg. Trips | Total Trips



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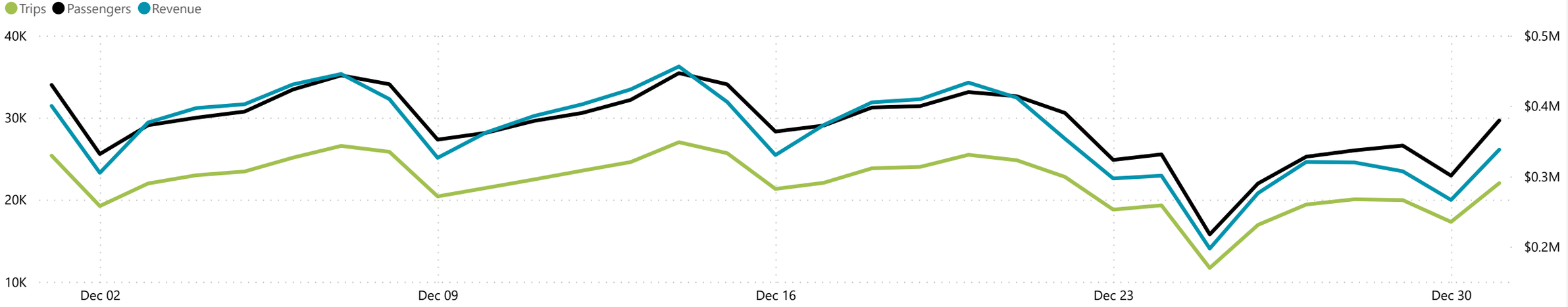
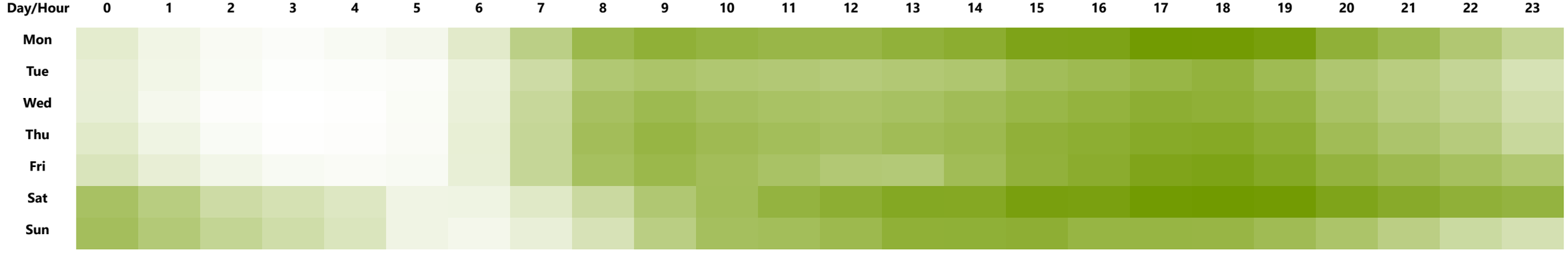
## Daily Trend




## Trips by Day / Hour



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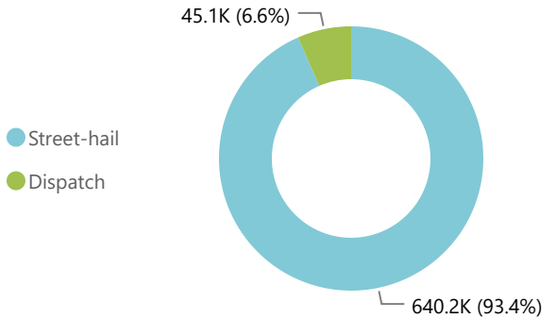
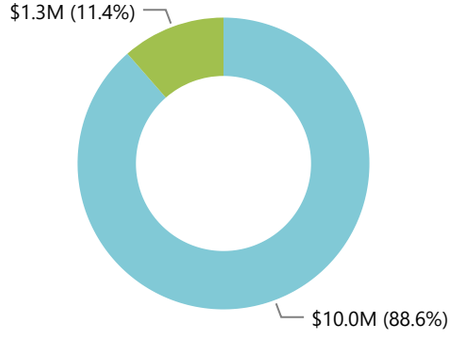
## Trips by Trip Type



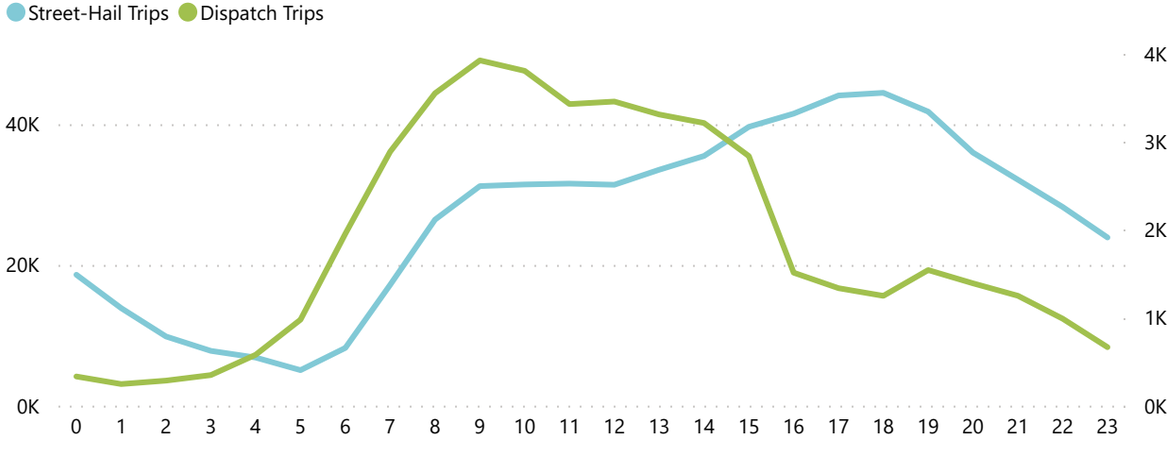

## Revenue by Trip Type



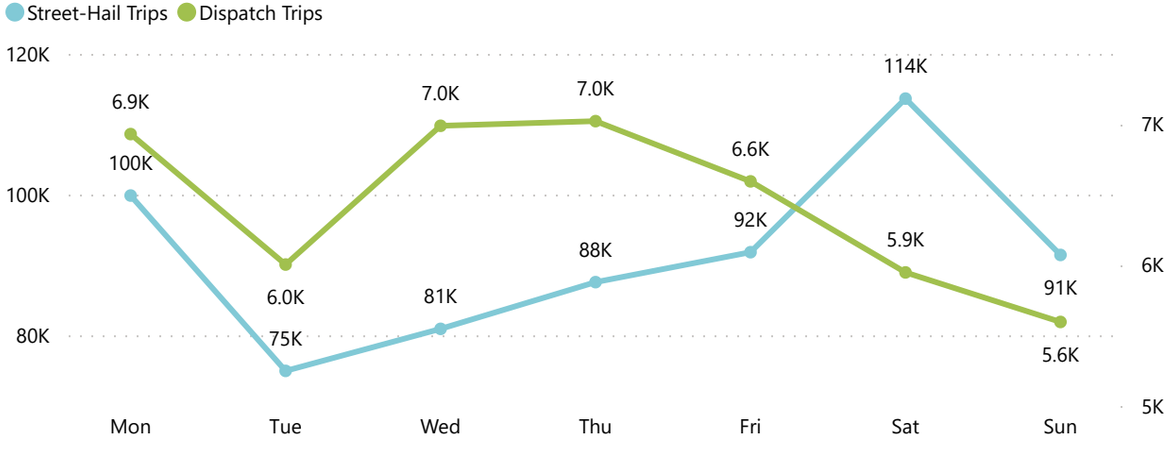

## Avg. Revenue by Trip Type


## Avg. Tip* by Trip Type


## Trips per Trip Type by PickUp Hour




## Trips per Trip Type by Day



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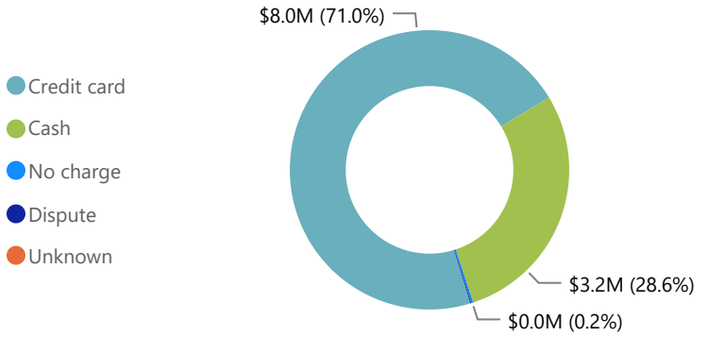
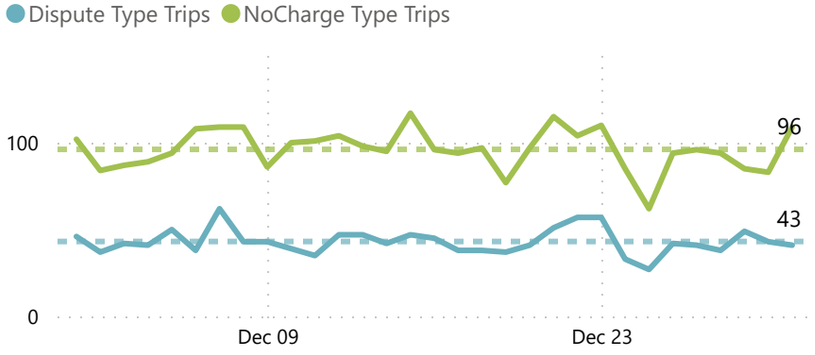
## Payment Type Analysis

### Payment Type Distribution

Trips | Revenue



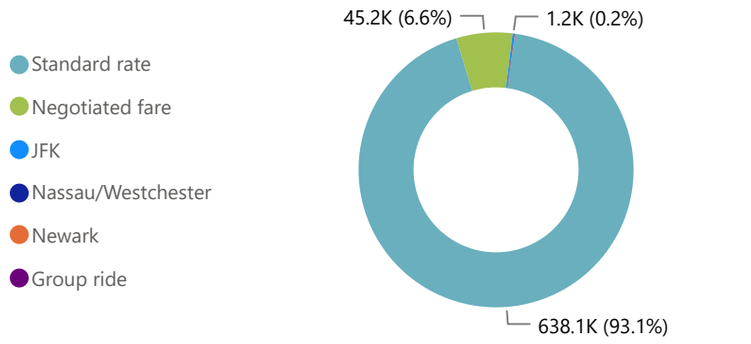

### Daily Trend




## Rate Code Analysis

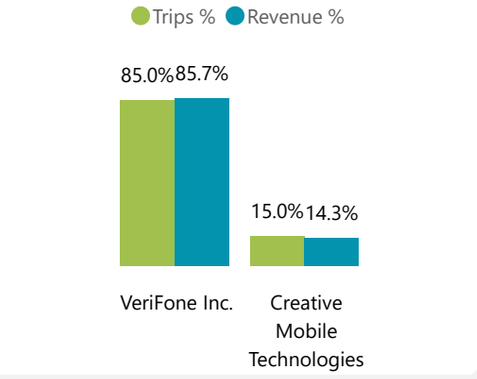
### Rate Code

Trips | Revenue

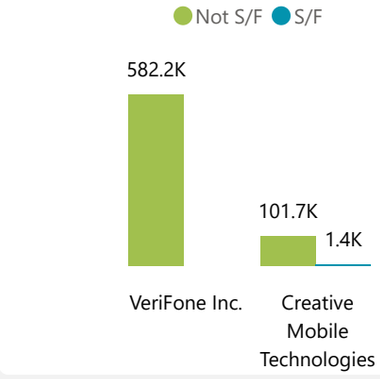



## Vendor Analysis

### Vendor Comparison

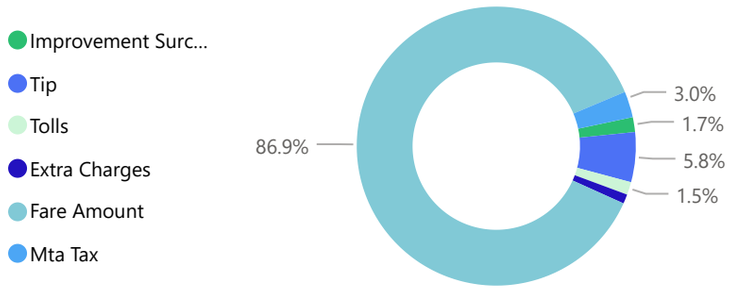



### Store & Forward by Vendor

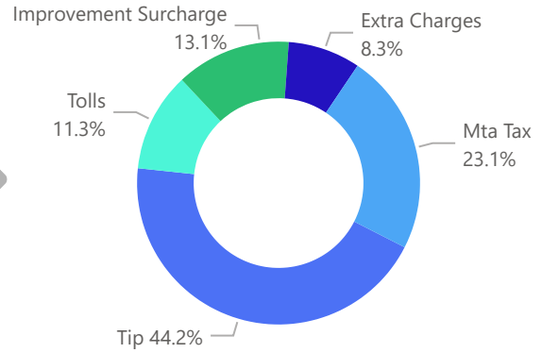



## Total Amount Analysis

### Total Amount Breakup




### Breakup (Excluding Fare Amount)



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## Insights:

- There are 3 denominations we are looking at - **Trips, Revenue,** and **Passengers**.
- The A -> B by trips and revenue charts show that higher trips may not always result in higher revenue and that can be understood by looking at the average revenue KPI.
- Trips by Day chart in the overall tab, in the given time frame, we see different count for each day (for Eg. - Monday might occur more than Tuesday depending on what time frame are we considering). That's why it is important to see average trips per day along with the total count to get the full picture.
- Trips/revenue follows cyclical/periodic pattern but doesn't display any trend. But this is a very short time frame to say something concrete.
- Most Pickups from Brooklyn Borough but trips with dispute as payment type are 60% less than that of Manhattan Borough.
- The daily trend chart shows a dip on Dec 25th, which makes sense as that is a holiday and not only there might be less people travelling but there will also be less drivers available. This also shows a solid use case for the trend visual.
- We can see from the Trips by day/Hour chart that Sat and Sun have some traffic during midnight hours. That's expected due to people travelling late on Weekends. This chart can also be useful for the management to decide on how to best manage the taxi locations.
- Even though the average passenger count for Dispatch is lesser, the revenue per trip is almost twice that of street hail. Even when the revenue per trip is almost twice for dispatch the avg. tip amount is 1/5th of street hail. That’s not the case with the restaurants as high ticket / luxury restaurants tend to have more tip amount.
- Street hails peak at 9 AM while the dispatch peaks at 6 PM. Seems reasonable as office end times are uncertain. So is the case with weekends and weekdays. Weekends are more uncertain as people make spontaneous plans and hence resulting in lower dispatch volumes.
- Store and Forward only appears with CMT vendor and it is a high number of trips considering that there are no S/F's with Verifone Inc.
- 122 records show improvement fee even though they are dispatch.