Jumpman23 in New York

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If Jumpmen23's business vision is to transform the way goods move around the city by having anything delivered on-demand

To address CEOs questions/interests:
- How are things are going in New York?
- Reports on data integrity issues

Operations

- Orders placed and delivered on time
  - Partner efficiency
  - Jumpmen efficiency
  - Inventory for non-perishable
- Orders placed and delivered as ordered (No data available)

Revenue & Growth

- Revenue & Cost of delivery (No data available)
- Adding & retaining customers
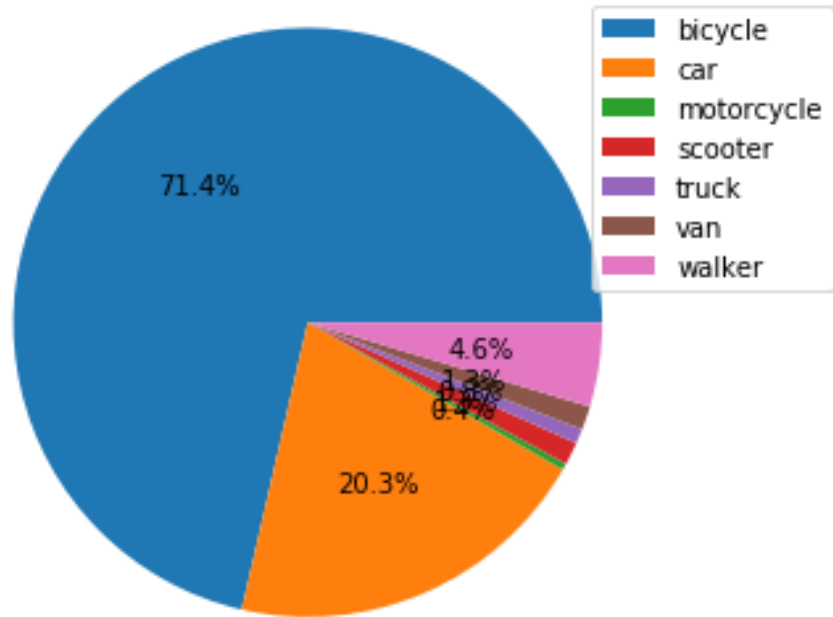 - Customer & deliveries growth

Product & Technology

- On-demand ordering
- Data quality

Analysis conducted in Jupyter Notebook and following slides with data and time constraints.

How are Jumpmen making deliveries?

Deliveries by Vehicle Type

Legend:
- bicycle
- car
- motorcycle
- scooter
- truck
- van
- walker

71.4%
20.3%
4.6%
1.3%
0.4%

Over 70% of deliveries are completed
on bikes

Average delivery time by vehicle type

	Bicycle	Car	Other
Time to reach pickup (mins)	11.7	15.5	14.7
Time to reach drop off (mins)	13.2	17.0	15.5
Total delivery time (mins)	44.0	52.0	49.4

On average, deliveries are made 20% faster than
on bicycles than on cars.

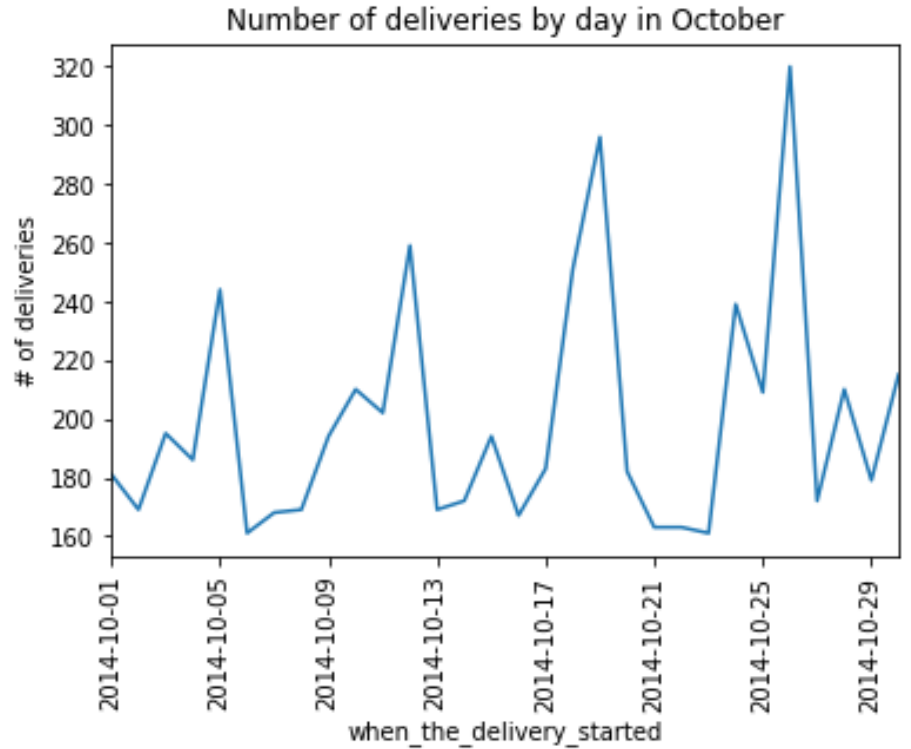# Popular Delivery Locations: Pick up and Drop off Locations
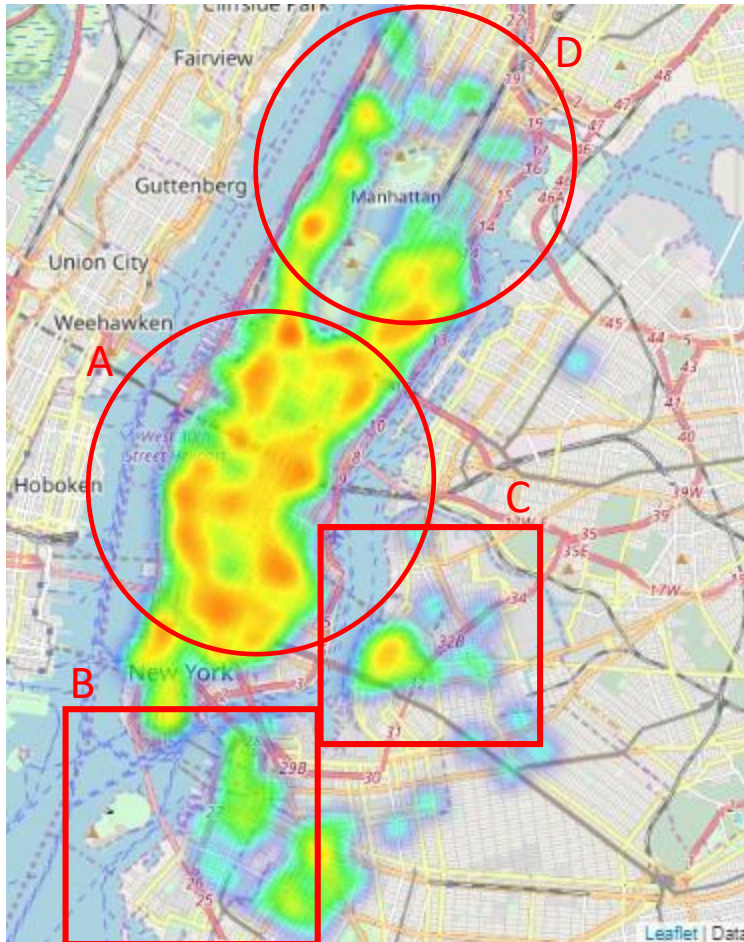
- Differences in heat map observed in pick up and drop off locations, which is not surprising.

- Jumpmen are typically within 10-15 minutes from pick up location.

- Most pick ups are within shape A

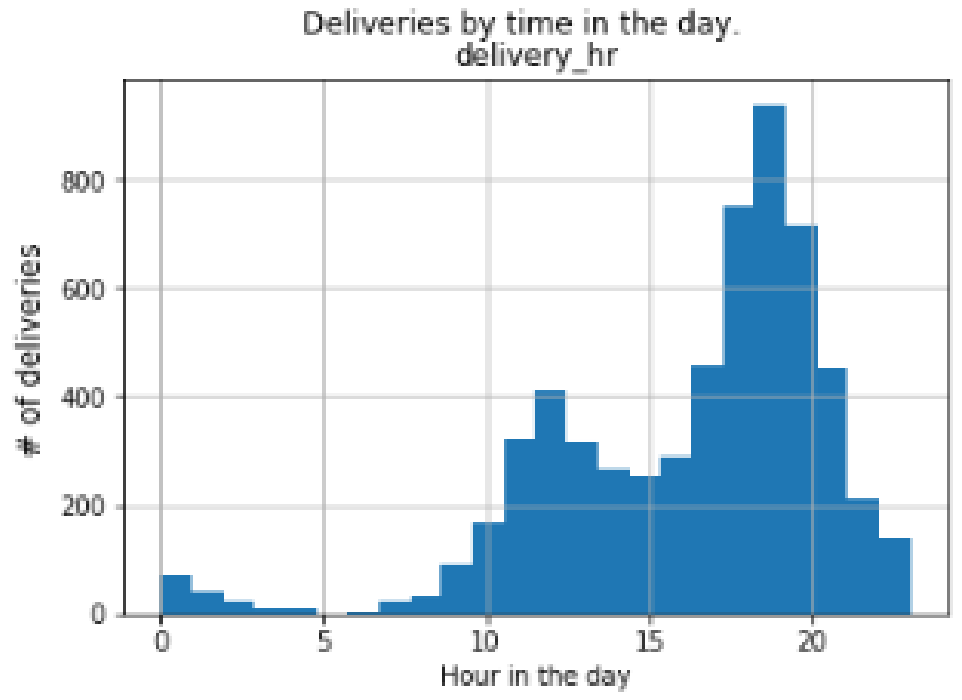- Drop offs are more distributed across the city (shape A – D)
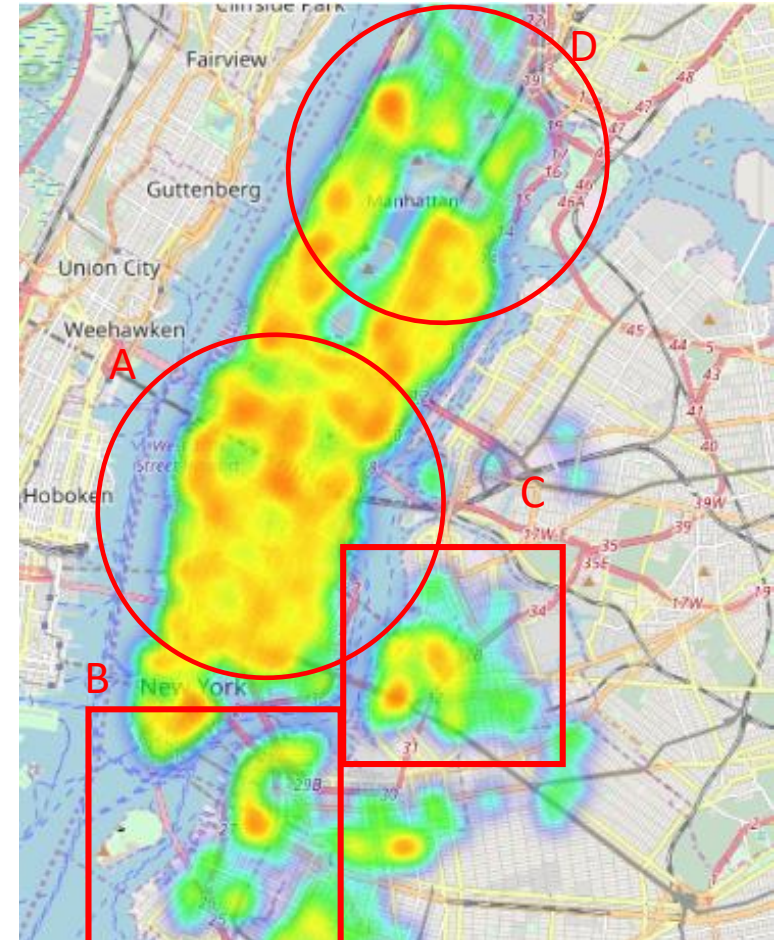
Popular delivery times: Weekly & Daily

Demand trend observed in October data, with highest demand on Sundays

Peaks in deliveries early evening (6-8pm) and midday (11 am -1pm) .

Revenue & Growth

5214 deliveries
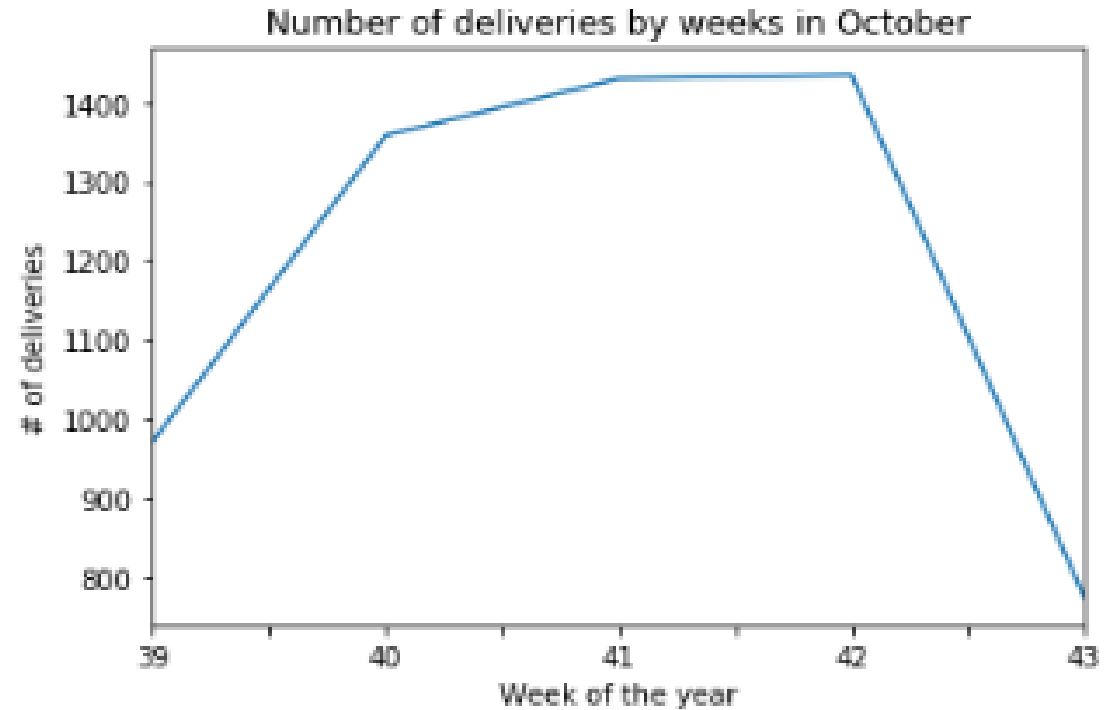
from **898** partners

Top 10 completed 29% deliveries

made by **3192** customers

Top 10 completed 3% deliveries

delivered by **578** jumpmen

Top 10 completed 12% deliveries

Number of deliveries by weeks in October

Upward trend in the number of deliveries.

(Data for 43rd week not provided)

Product & Technology

On-demand Ordering

- For data available, 83% of deliveries took 10 minutes or less to complete

How long does it take to place orders?
time_to_order

*2500+ records analyzed (data missing for ~50% deliveries)

Data Integrity

- 32 duplicate records

- No primary key (unique) to identify records for the case of deliveries with multiple items ordered

- Up to 50% records with missing values

  - Missing record may skew analysis. E.g. 50% of data missing for time taken to place order.

  - From initial analysis, some may be by design e.g. 550 records missing when_the_Jumpman_arrived_at_pickup' and when_the_Jumpman_left_pickup' data. None recorded when jumpman has inventory on hand to be delivered

- There are some inconsistencies in data provided

  - E.g. for item categories: "A la Cart", "A la Carte", "Appetizer", "Appetizers"

Recommendations & Next Steps

Operations

- Provide incentives for jumpmen delivering with optimal vehicle type. (Statistically significant difference in cost of delivery, time to deliver, etc.)

- Further analysis into why deliveries are higher on Sunday.

- Cleanse data and conduct analysis on favorite places and frequently order items. Jumpmen can stock up on these items or Jumpan23 can enter into partnerships with favorite places

Revenue & Growth

- Cluster & cohort analysis to better understand customers and behavior

- Model customer behavior/journey to understand customer funnel, churn & retention

- Data analysis integrated with external data e.g. NY demographic data for further insights

Product & Technology

- Talk to product & engineering team about design to understand trade off between user friction and mandatory data.

- Work with operations to standard process for collecting data and data quality e.g. ensure jumpmen enter receipts data collection consistencies

- Validate format, constraints on database