











### **Starbucks Objectives:**

Prototype a Spring breakfast menu in a few stores in NYC

- a. optimize preparation and serving processes
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### **BDS Outreach Goals:**

Get customers in the store Get customers to try the new products Get customers to give feedback





### **Initial Solution Constraints:**

Prototype processes in a few stores





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Look for new customers with spontaneous foot traffic





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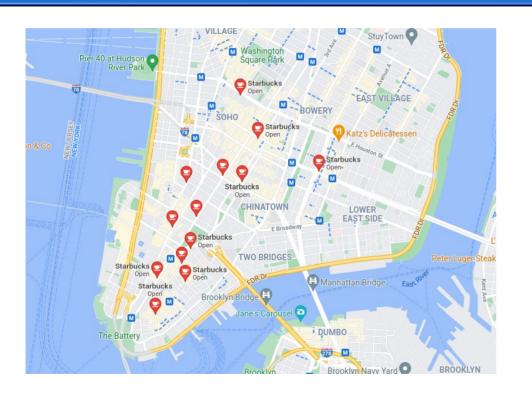
Prototype processes in a few stores Look for new customers with spontaneous foot traffic

### **Initial (symbiotic) solution ideas:**

Focus advertising on morning MTA users

Find a few stores close to each other and near MTA stops with morning traffic



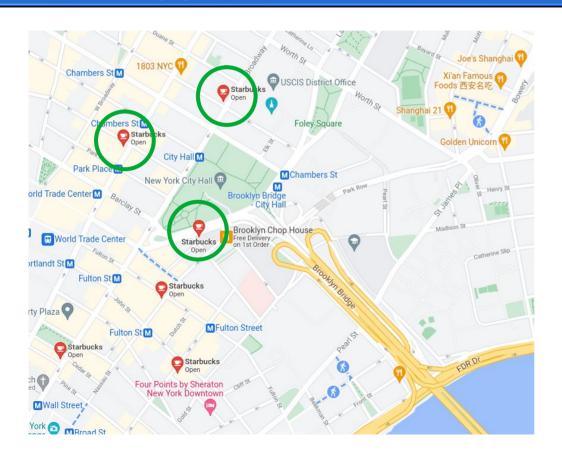


Lower Manhattan has a high density of Starbucks

High potential to have focused outreach at only a few stations

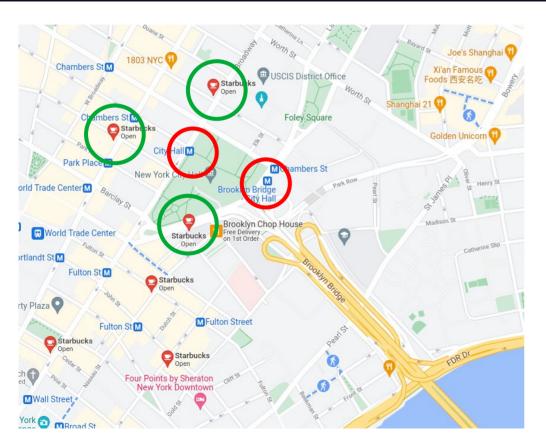
High potential to reach folks from many burrows of NYC (e.g. x-town traffic)





Choose these three Starbucks





Choose these three Starbucks

Choose these stations (after some exploration)



**MTA Focus Stations** 

City Hall Brooklyn Bridge





### **Next Questions:**

When (exactly) and How should the outreach happen?



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When (exactly) and How should the outreach happen?

Exploratory data analysis of MTA data will present some *constraints* and *inspiration* on how to proceed.



### Data:

*MTA Turnstile Data* – MTA ridership

http://web.mta.info/developers/turnstile.html

Google Maps – location of MTA stops, street views, and Starbucks



### **Tools:**

*Ubuntu 20.04* – Operating system

*DB browser for SQLite3* – initial data browsing and ideation

Python – for analysis and visualization numpy
Pandas
Matplotlib

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### **Description of relevant data:**

4-hourly turnstile entries and exits MTA Line MTA Station



pixabay.com



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Also available: SCP, UNIT, Control Area (C/A)



pixabay.com

**City Hall MTA Stop (Lines = NRW, R):** 

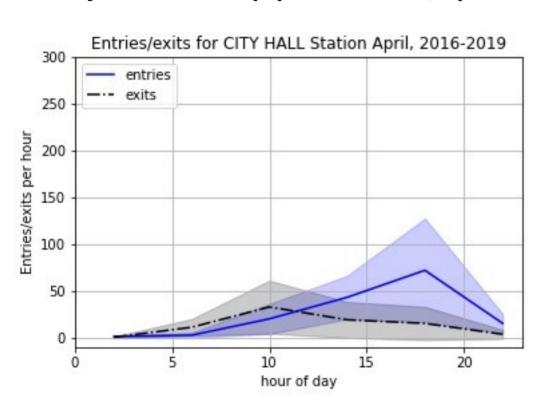




maps.google.com



### **City Hall MTA Stop (Lines = NRW, R):**



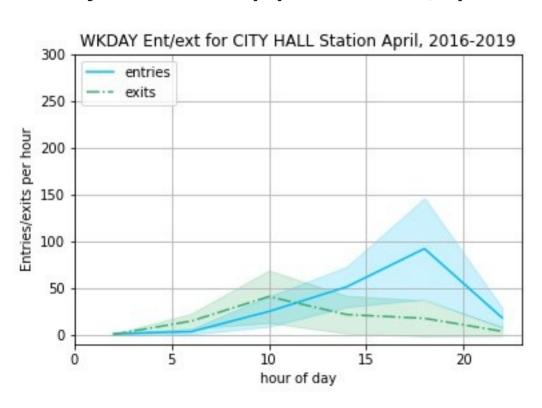


maps.google.com

more entries than exits at this stop



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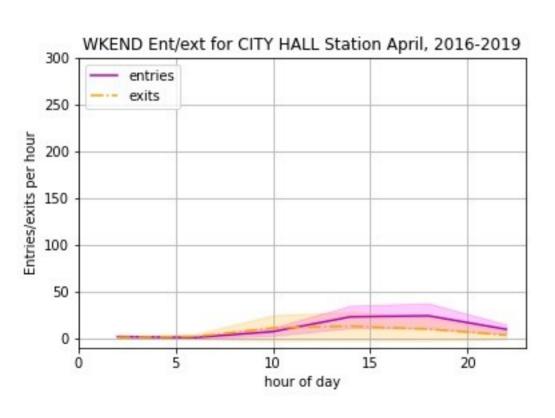


maps.google.com

Weekday exits peak in the morning Although central, not a high flow rate



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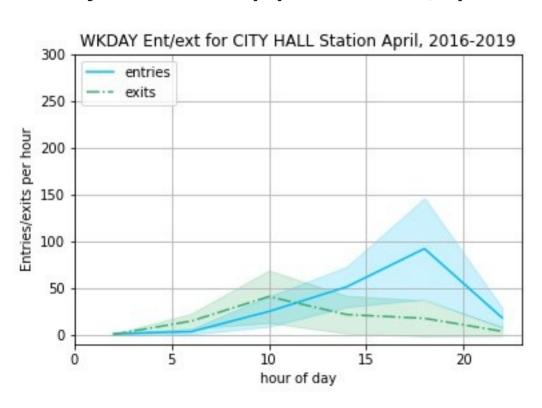


maps.google.com

Very low flow rate during weekends Peaks in late morning/afternoon



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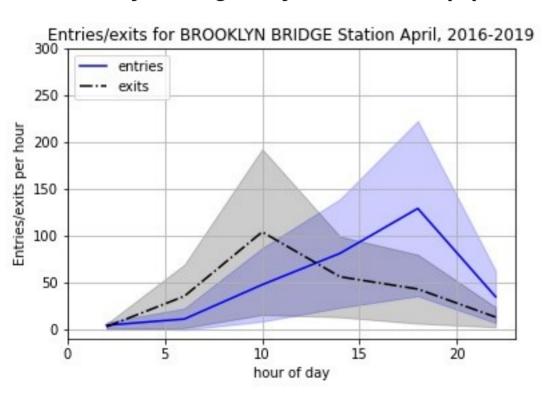


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### **Brooklyn Bridge-City Hall MTA Stop (Lines = 456JZ):**



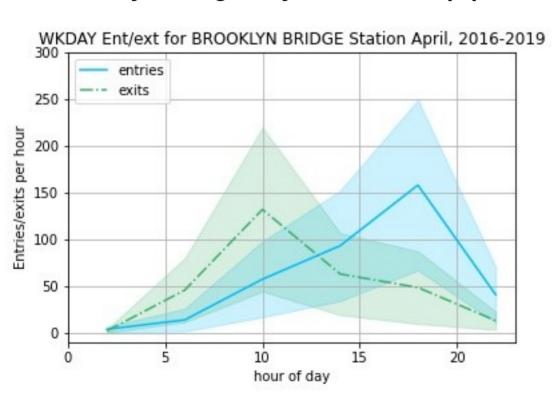


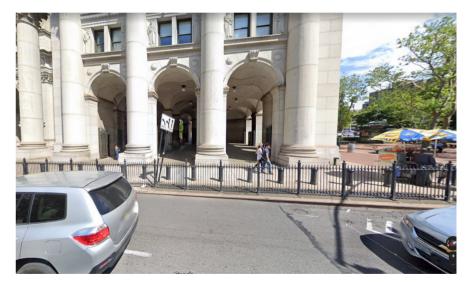
maps.google.com

Exits peak in the morning



### **Brooklyn Bridge-City Hall MTA Stop (Lines = 456JZ):**



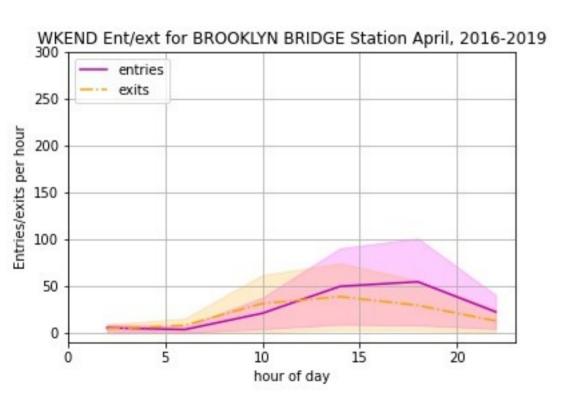


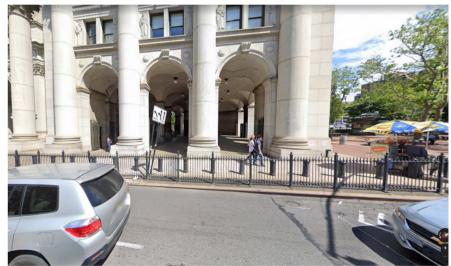
maps.google.com

Exits peak in the morning



### **Brooklyn Bridge-City Hall MTA Stop (Lines = 456JZ):**





maps.google.com

Low flow rate on the weekends Exits peak in the late morning/afternoon



### **Recommendations for outreach model:**

Giveaway to entice new users to enter store and experience new products

Inside station posted signs alerting riders to expect free stuff as they surface.

Streetside, have tables to give away free 8oz drip with a QR code 5\$ credit for the three Starbucks stores.

Deployment only during the morning commute (8 am – 12 pm, weekdays).



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### Rationale:

(New) customers (w/ incentives) are more likely to be open to new experiences and give feedback.

Stations chosen have (relatively) high exit traffic in the morning.

Stations are chosen for complimentary MTA Line (i.e. demographic) coverage

Weekend traffic is low and shifted towards afternoons.

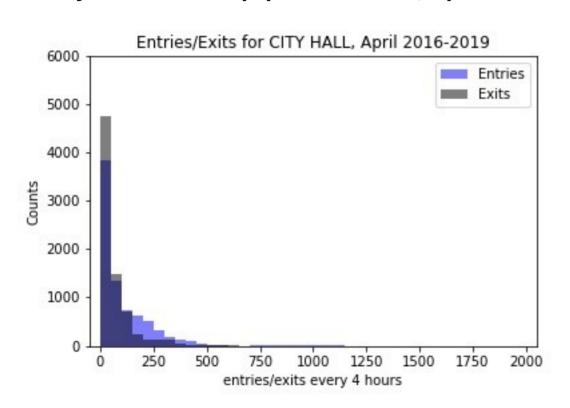
### **Questions/Comments?**







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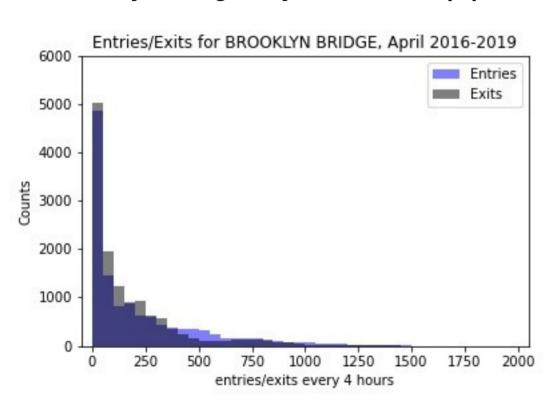


naps.google.com

more entries than exits at this stop



### **Brooklyn Bridge-City Hall MTA Stop (Lines = 456JZ):**





maps.google.com

Higher flow rate than city hall