UberEats - Team 5

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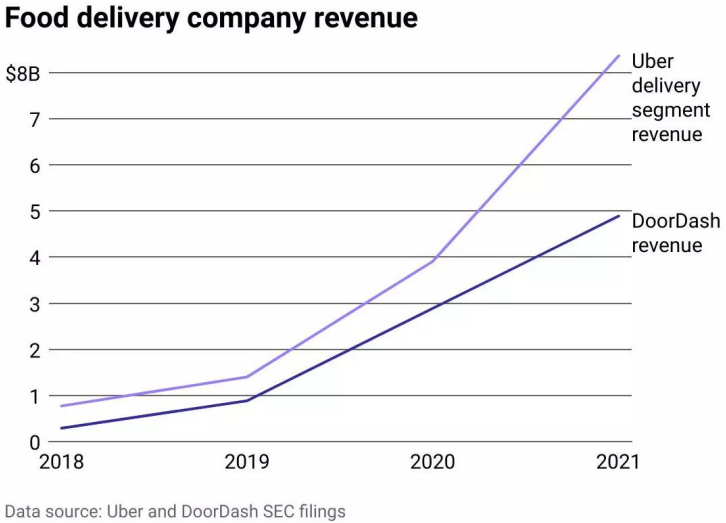
Proposal/Statement of the Problem



- In first year of COVID-19, Food Delivery industry more than doubled revenue from previous year
- People looked down needed us to get food, groceries, pharmacy supplies
- Problem: How do we maintain similar levels of production/keep employees/maintain profitability post COVID-19?

Uber Eats

The Ways to increase UberEats sales

- **Recommendation Emails**
  - Communicate with customers
  - Build up long-term relationships
  - Fit their habits and needs

- **Platform Color**
  - Indirectly change the customers' decision
  - Stimulating buying behaviors
  - Enhancing buying considerations

- **Reduce waiting with proper delivery charge**
  - Recognized as economic and physical cost

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Research Question 1

“Will emails with selected recommendations encourage users to use UberEats in New York city?”

- Independent Variable is whether or not users received email.
- Dependent Variable is customers’ purchasing on UberEats.
- Null Hypothesis is there is no relationship between receiving selected recommendation email and purchasing on UberEats in New york.
- Alternative Hypothesis is selected recommendation email will increase customers’ purchasing on UberEats in New york.

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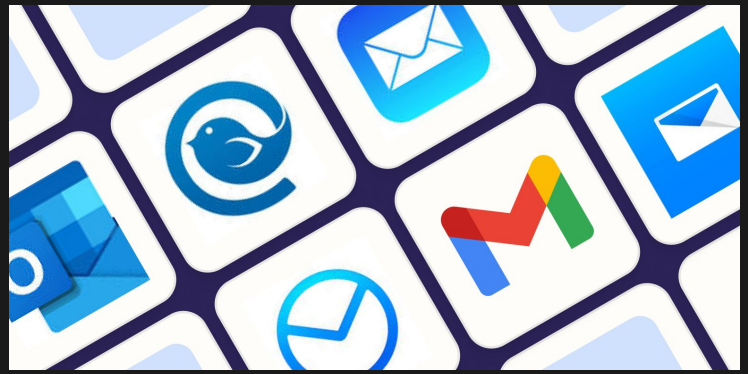
Research Question 1 Simulation



- Control group: mean=220 sample size=50 sd=10
- Treatment group: mean=225 sample size=50 sd=10
- effect size=0.5 power=0.8 Two sample t test

```
# A tibble: 1 × 3
  effect lower_ci     p
   <dbl>    <dbl> <dbl>
1 -0.484    -3.56 0.603
```

No effect

```
# A tibble: 1 × 3
  effect lower_ci       p
   <dbl>    <dbl>   <dbl>
1   4.52     1.44 0.00825
```

effect

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Research Question 2

“Will the color green on Ubereats platform surface encourage users to purchase? ”

- Independent Variable is the color of Ubereats platform switch to red, yellow, or blue.
- Dependent Variable is the satisfaction percentage of users.
- Null Hypothesis says the purchase rate of user is not affected by the switching color on Ubereats.
- Alternative Hypothesis shows the purchase rate of users is affected by the switching color on Ubereats.

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Research Question 2 – Simulation

- For simulation, control group [mean=220, sample size=500, standard deviation=10]
- Treatment group [mean=222, sample size=500, standard deviation=10]
- Effect size: 0.48
- Power: 0.8
- Two sample T Test

```
# A tibble: 1 × 3
  effect low_ci       p
   <dbl>  <dbl>   <dbl>
1   1.51  0.468 0.00866
```

With An Effect

```
# A tibble: 1 × 3
  effect low_ci     p
   <dbl>  <dbl> <dbl>
1 -0.486  -1.53 0.778
```

No Effect

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Research Question 3

"Can we increase UberEats sales in New York City by providing a shorter waiting time but more delivery charge service option? "

Null Hypothesis: shorter waiting time but more delivery fee service wouldn't encourage users to use UberEats, hence not increasing UberEats sales.

Alternative Hypothesis: shorter waiting time but more delivery fee service would encourage users to use UberEats, hence increasing UberEats sales.

Improve user experience, cut waiting time

- **Send out surveys**
  - Random select user
  - Question with real-life scenario
- **Data Collection**
  - Follow-up email
  - Information confidentiality
- **Initial data analysis & Simulation**

The independent variable (treatment) : whether selected UberEats users would choose this service

The dependent variable (outcome) : UberEats sales ($)

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Research Question 3 – Simulation

Repeat 1000 times for two scenario

Data analysis

- Sample size: 620
- Sample mean: $220 | $222
- Standard deviation: 10

Two Sample T Test

- Effect Size: 0.2
- Statistical Power: 0.8
- confidence interval: 0.67-Inf

If the average monthly sale per user could achieve the expect size ($2), UberEats could expect millions of dollar sales increasing per month from New York city alone.

Uber
Eats

Thank you for your time