

lyft vs Uber



How to help Lyft increase market share



-- BY Xufei Li

Background

Uber owns 68% market share while Lyft owns 32%

Uber & Lyft overall comparison 2018(nationwide):

| | Uber | Lyft | |
|-----------------------|-----------------------------|----------------------------|----------------|
| US rideshare bookings | \$22.39 billion (67.46%) | \$8.97 billion (32.32%) | |
| Annual revenue | \$9.29 billion | \$2.16 billion | |
| Trips | 5.2 billion | 619.4 million | |
| Customer loyalty | 63%(Uber only) | 27%(Lyft only) | %10 in between |

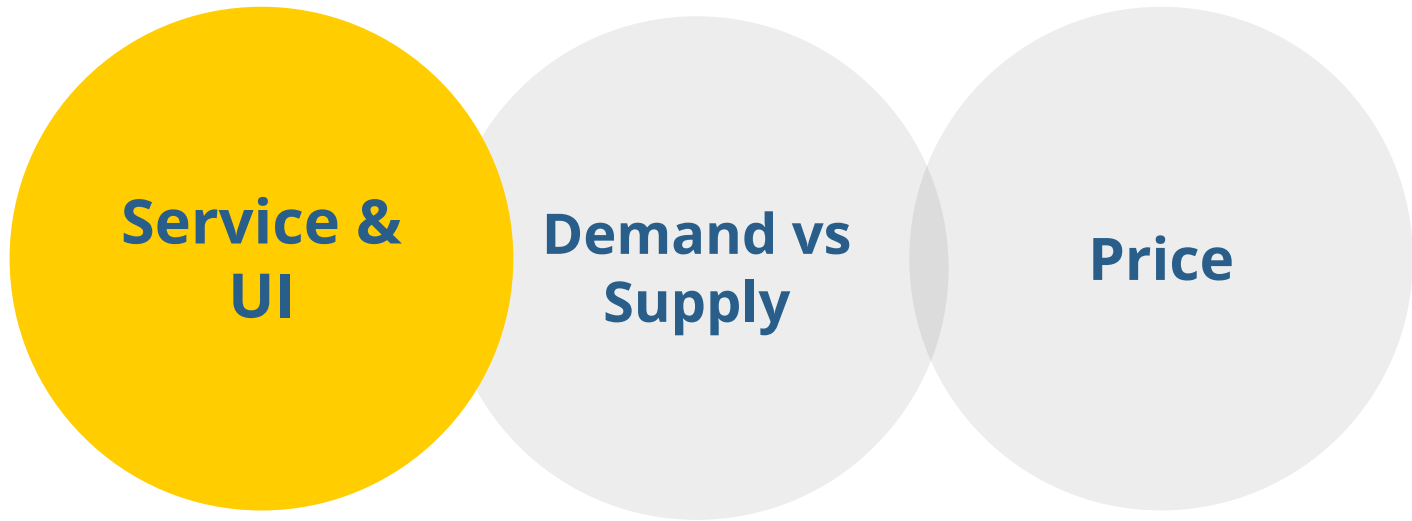
Data source:

<https://backlinko.com/uber-users>

<https://backlinko.com/lyft-users#lyft-riders>



Why does Uber have more market share than Lyft?



Improve Service & UI



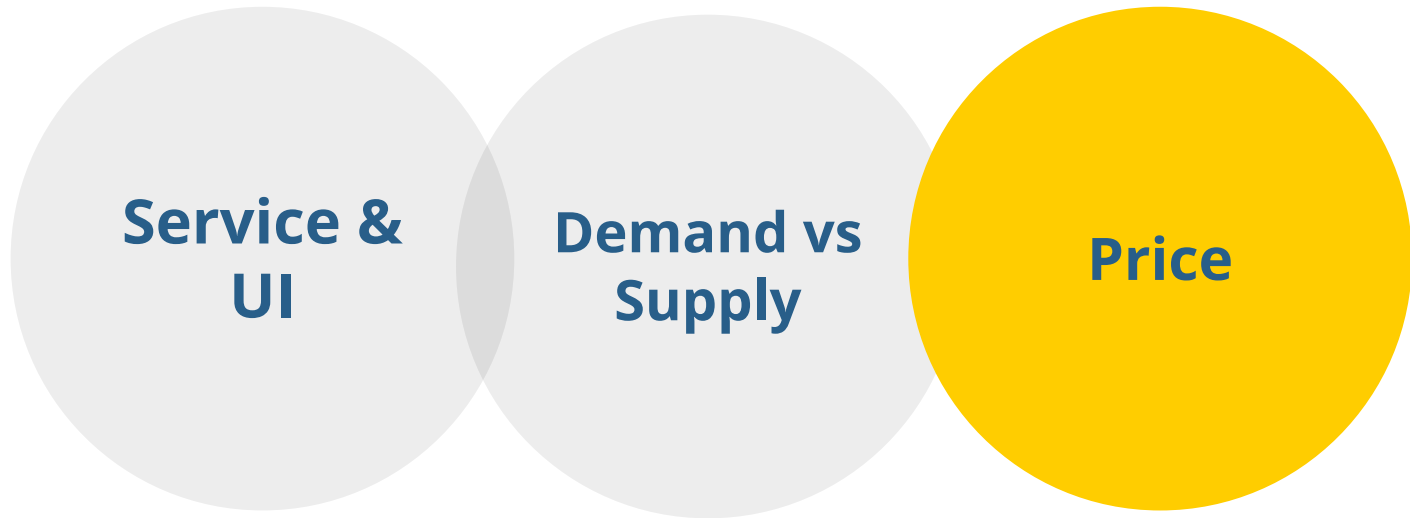
Why does Uber have more market share than Lyft?



Increase driver amount



Why does Uber have more market share than Lyft?



Adjust multiplier



Scope & Design project

01

Business Impact

Help Lyft increase market share

02

DS Solution Path

- 2 regression model
- Identify if lyft overpriced

03

Impact Hypothesis

- Price difference (if overpriced)
- Adjust “surge-multiplier”
- Greater market share

04

Risk

Lower profit →
Demotivated drivers

05

Cost

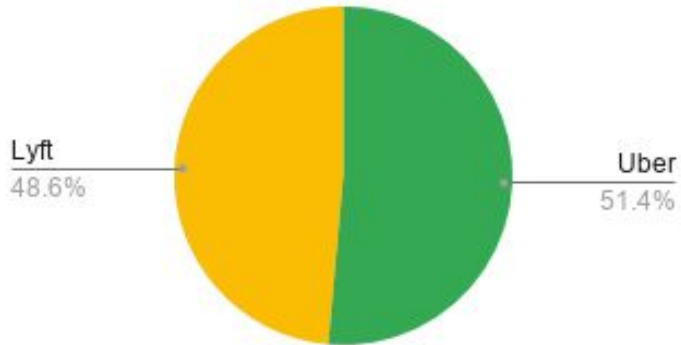
Not as much profit per ride
→ loss in revenue



Analysis in Excel

Data: Kaggle - Uber & Lyft Cab Price
11/26/2018(Monday) - 31,587 rows

Total income - Uber vs. Lyft



- Average final price: (DIFF: **-\$2.86**)
Uber \$15.33 vs. Lyft \$18.19
- Average distance: (DIFF: **0.021 mile**)
2.198 miles vs 2.177 miles
- Average Unit price: (DIFF: **-\$1.38/mile**)
Uber \$6.97 vs Lyft \$8.35



Analysis in Excel

Comparison by pick up location

Revenue diff > \$3,000

(Uber - Lyft):

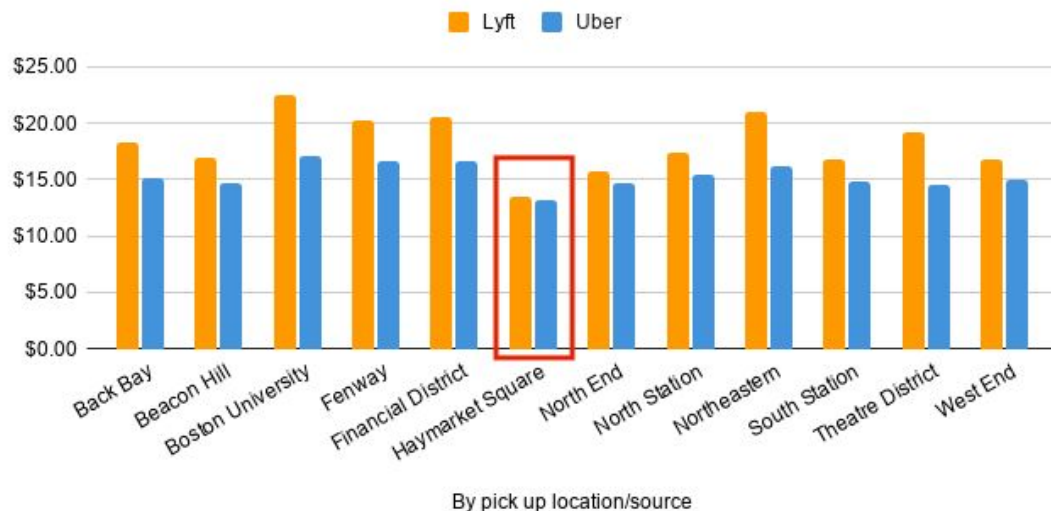
“Beacon Hill”

“Haymarket Square”

“South Station”

“West End”

AVERAGE of final_price by Source - Uber vs. Lyft



“Haymarket Square”

Uber:

Counts: 1,451

Lyft:

Counts: 1,192



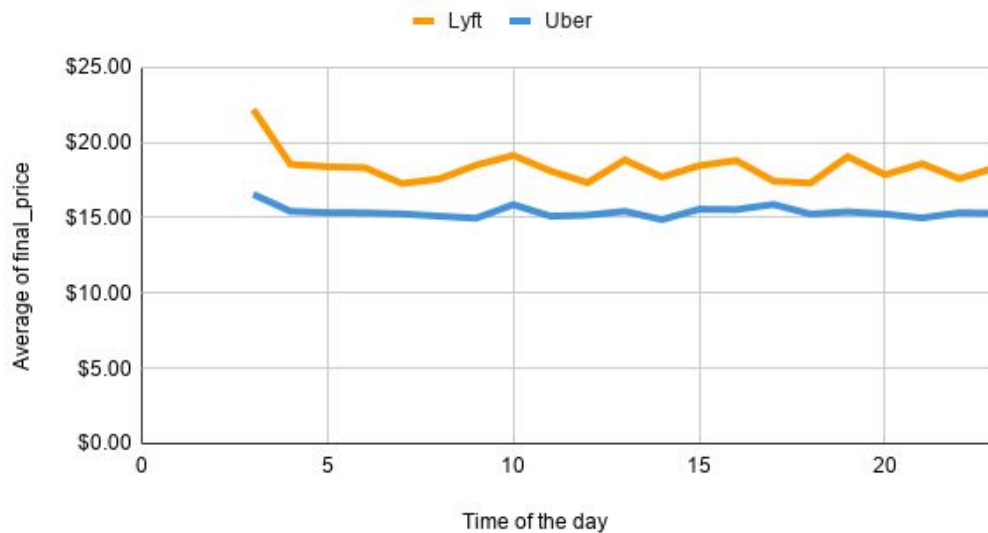
Analysis in Excel

Comparison by time of the day

Revenue diff > \$1,500:

12pm, 14 pm, 18pm, 22pm,
23pm

AVERAGE of final_price by time of the day - Uber vs. Lyft



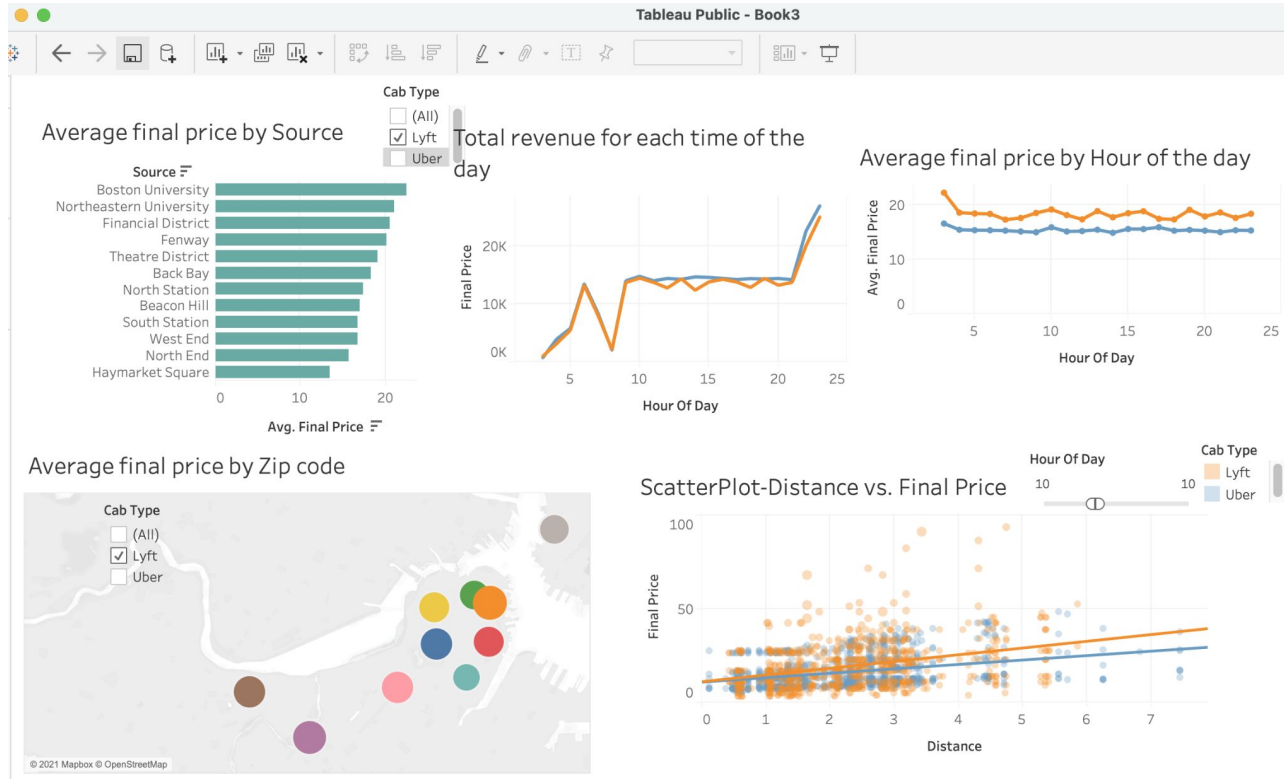


Analysis in Tableau

“Beacon Hill”
“Haymarket Square”
“South Station”
“West End”

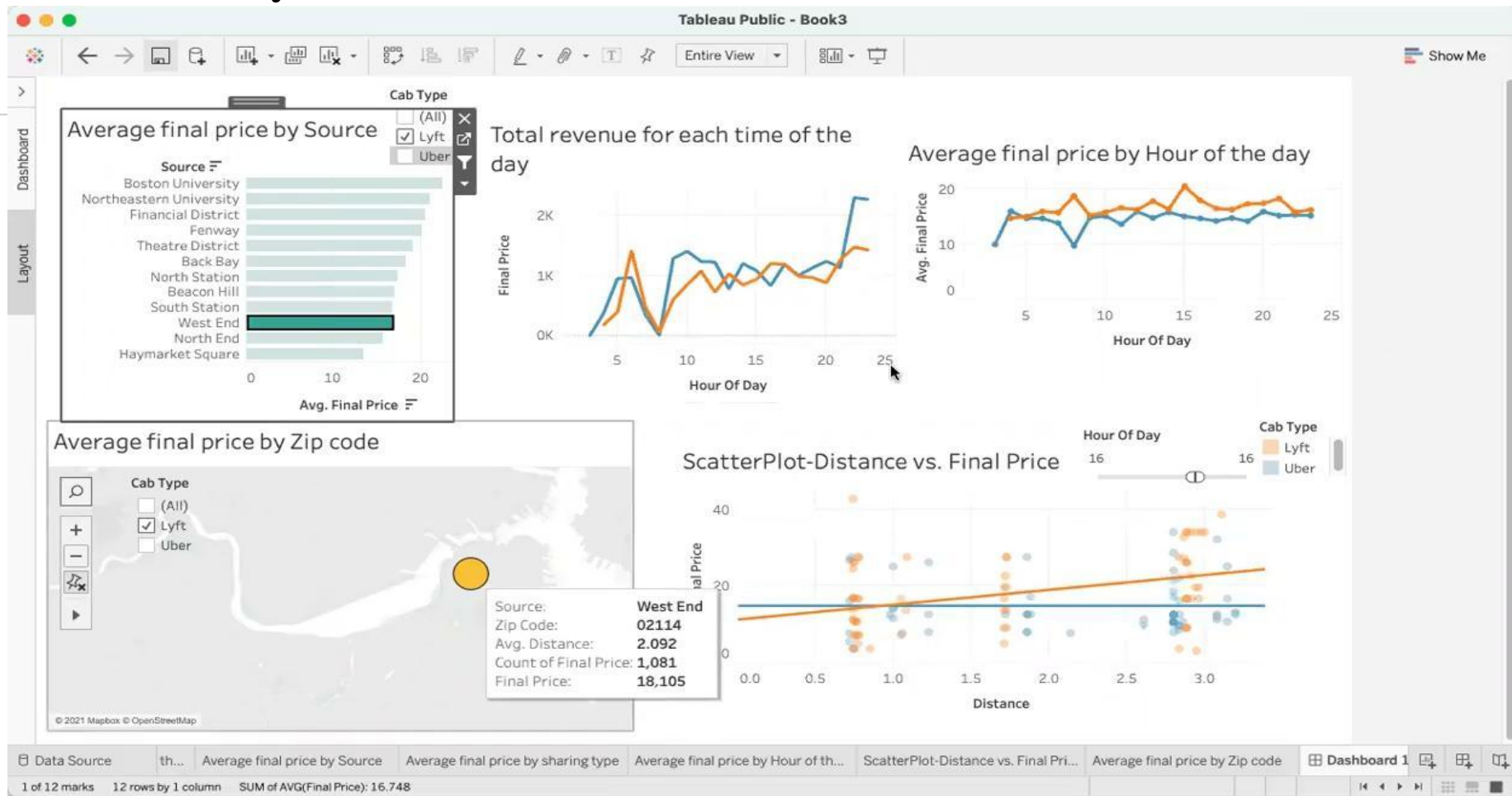


Analysis in Tableau



Analysis in Tableau

[Google Drive Link](#)



Conclusion

- Price isn't a key factor
- Stimulate more drivers to work between 9:00-12:00 & 18:00-22:00 for our targeted locations
(See Appendix 5 for more details)
- Attracts new drivers to join

“

Future Work



We only used Monday's data, so for next step, I want to work on the entire dataset to find out if the same pattern happens everyday. If so, we can start to plan out how to bring in more drivers.





Appendix 1 - Assumptions

- **Assumption 1:**
Lyft UI is good, almost no user complains about it. Demand & Price is main factor for the difference
- **Assumption 2:**
We are assuming the Uber's missing values is "missing at random", price for Uber is right skewed, so I filled na with median of Uber's price
- **Assumption 3:**
We are assuming there's no difference on distance between Uber & Lyft user for each locations



Appendix 2 - Pivot Table(by source)

| Pivot Table - Comparison by pick up location | | | | | | | | | |
|--|------------------------|-----------------------|--------------------|------------------------|-----------------------|--------------------|---------------------------|------------------------|---------------------------|
| | cab_type | | Values | | | | | | |
| | Lyft | | | Uber | | | | | |
| source | AVERAGE of final_price | COUNTA of final_price | SUM of final_price | AVERAGE of final_price | COUNTA of final_price | SUM of final_price | AVG PRICE DIFF(Uber-Lyft) | COUNTS DIFF(Uber-Lyft) | SUM PRICE DIFF(Uber-Lyft) |
| Back Bay | \$18.31 | 1,229 | \$22,503 | \$15.15 | 1515 | \$22,959 | -\$3.16 | 286 | \$455 |
| Beacon Hill | \$16.95 | 1,105 | \$18,729 | \$14.72 | 1496 | \$22,022 | -\$2.23 | 391 | \$3,293 |
| Boston University | \$22.56 | 991 | \$22,353 | \$17.06 | 1407 | \$24,007 | -\$5.49 | 416 | \$1,654 |
| Fenway | \$20.17 | 1,143 | \$23,052 | \$16.61 | 1434 | \$23,819 | -\$3.56 | 291 | \$766 |
| Financial District | \$20.53 | 1,281 | \$26,302 | \$16.67 | 1458 | \$24,303 | -\$3.86 | 177 | -\$2,000 |
| Haymarket Square | \$13.45 | 1,192 | \$16,028 | \$13.22 | 1451 | \$19,177 | -\$0.23 | 259 | \$3,149 |
| North End | \$15.72 | 1,210 | \$19,021 | \$14.66 | 1425 | \$20,893 | -\$1.06 | 215 | \$1,872 |
| North Station | \$17.39 | 1,175 | \$20,432 | \$15.37 | 1424 | \$21,889 | -\$2.02 | 249 | \$1,457 |
| Northeastern University | \$21.02 | 1,171 | \$24,617 | \$16.19 | 1484 | \$24,025 | -\$4.83 | 313 | -\$593 |
| South Station | \$16.75 | 1,203 | \$20,149 | \$14.86 | 1577 | \$23,438 | -\$1.89 | 374 | \$3,289 |
| Theatre District | \$19.15 | 1,219 | \$23,349 | \$14.51 | 1443 | \$20,945 | -\$4.64 | 224 | -\$2,404 |
| West End | \$16.75 | 1,081 | \$18,105 | \$14.97 | 1473 | \$22,049 | -\$1.78 | 392 | \$3,945 |



Appendix 3 - Pivot Table(by time)

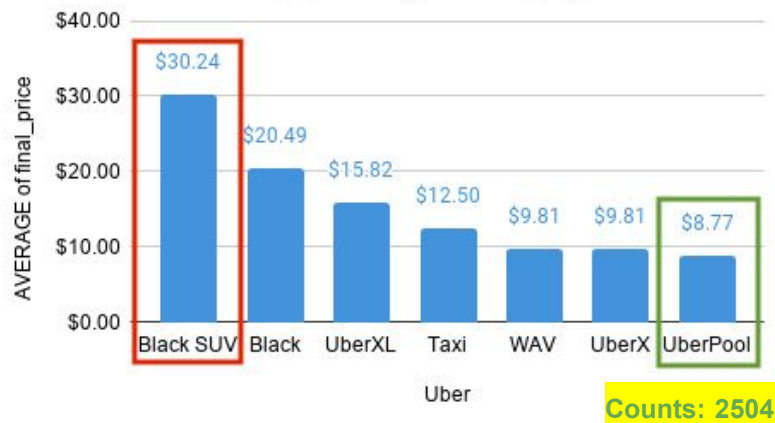
| Pivot Table - Comparison by time of the day | | | | | | | | | |
|---|------------------------|-----------------------|--------------------|------------------------|-----------------------|--------------------|--------------------------|-----------------------|---------------------------|
| | cab_type | Values | | | | | | | |
| | Lyft | | | Uber | | | | | |
| hour_of_day | AVERAGE of final_price | COUNTA of final_price | SUM of final_price | AVERAGE of final_price | COUNTA of final_price | SUM of final_price | AVGPRICE DIFF(Uber-Lyft) | COUNT DIFF(Uber-Lyft) | SUM PRICE DIFF(Uber-Lyft) |
| 3 | \$22.21 | 43 | \$955 | \$16.56 | 41 | \$679 | -\$5.65 | -2 | -\$276 |
| 4 | \$18.56 | 168 | \$3,117 | \$15.43 | 252 | \$3,889 | -\$3.12 | 84 | \$771 |
| 5 | \$18.39 | 296 | \$5,444 | \$15.34 | 376 | \$5,768 | -\$3.05 | 80 | \$323 |
| 6 | \$18.33 | 719 | \$13,180 | \$15.33 | 877 | \$13,442 | -\$3.00 | 158 | \$262 |
| 7 | \$17.28 | 461 | \$7,966 | \$15.26 | 547 | \$8,346 | -\$2.02 | 86 | \$380 |
| 8 | \$17.58 | 121 | \$2,127 | \$15.11 | 131 | \$1,979 | -\$2.47 | 10 | -\$148 |
| 9 | \$18.50 | 738 | \$13,650 | \$14.97 | 933 | \$13,969 | -\$3.52 | 195 | \$319 |
| 10 | \$19.14 | 753 | \$14,416 | \$15.88 | 927 | \$14,717 | -\$3.27 | 174 | \$301 |
| 11 | \$18.11 | 756 | \$13,688 | \$15.11 | 924 | \$13,958 | -\$3.00 | 168 | \$270 |
| 12 | \$17.33 | 734 | \$12,719 | \$15.18 | 946 | \$14,358 | -\$2.15 | 212 | \$1,638 |
| 13 | \$18.84 | 759 | \$14,298 | \$15.43 | 921 | \$14,210 | -\$3.41 | 162 | -\$88 |
| 14 | \$17.71 | 697 | \$12,342 | \$14.88 | 983 | \$14,626 | -\$2.83 | 286 | \$2,284 |
| 15 | \$18.46 | 746 | \$13,768 | \$15.57 | 934 | \$14,540 | -\$2.89 | 188 | \$771 |
| 16 | \$18.81 | 756 | \$14,219 | \$15.54 | 924 | \$14,364 | -\$3.26 | 168 | \$144 |
| 17 | \$17.44 | 788 | \$13,743 | \$15.89 | 892 | \$14,171 | -\$1.55 | 104 | \$428 |
| 18 | \$17.31 | 740 | \$12,807 | \$15.24 | 940 | \$14,329 | -\$2.06 | 200 | \$1,522 |
| 19 | \$19.07 | 754 | \$14,378 | \$15.40 | 926 | \$14,258 | -\$3.67 | 172 | -\$120 |
| 20 | \$17.86 | 739 | \$13,198 | \$15.25 | 941 | \$14,352 | -\$2.61 | 202 | \$1,154 |
| 21 | \$18.59 | 736 | \$13,681 | \$14.99 | 944 | \$14,151 | -\$3.60 | 208 | \$471 |
| 22 | \$17.60 | 1,135 | \$19,974 | \$15.33 | 1469 | \$22,524 | -\$2.27 | 334 | \$2,550 |
| 23 | \$18.35 | 1,361 | \$24,974 | \$15.29 | 1759 | \$26,899 | -\$3.06 | 398 | \$1,925 |



Appendix 4 -Analysis in Excel

By cab_type & sharing_type:

AVERAGE of final_price by sharing type - Uber



Counts: 2487

- Lyft's most expensive sharing type is about \$4 more than Uber's most expensive type, Lyft Black XL has fewer rides, but around \$4,500 more in revenue.
- Lyft's cheapest sharing type is \$2.7 cheaper, UberPool has more rides and around \$8,000 more in revenue.

AVERAGE of final_price by sharing type - Lyft



Counts: 2337



Appendix 5 - Learnings From Tableau

Beacon Hill

Lyft may need more drivers between
16:00 to midnight

(16:00 - Uber **102** rides, Lyft **39** rides)

1

Haymarket Square

Lyft may need more drivers
14:00, 17:00, 19:00, 22:00

(22:00 - Uber **163** rides, Lyft **97**
rides)

2

Lyft may need more drivers around
14:00, 18:00, 22:00

(14:00 - Uber **104** rides, Lyft **63** rides)

South Station

3

Lyft may need more drivers
around 9:00-12:00, 22:00(22:00
- Uber **149** rides, Lyft **93** rides)

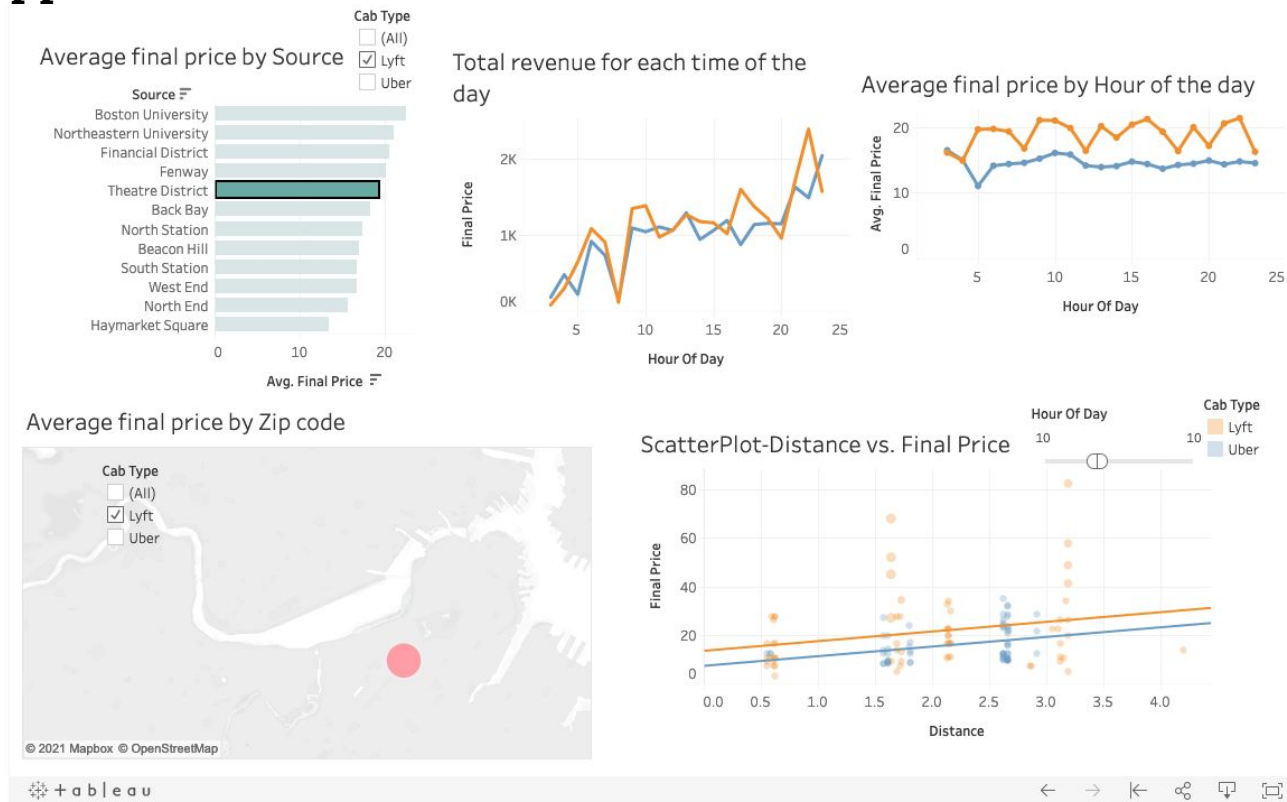
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West End



Appendix 6 - "Theatre District"

Lyft's average final price is higher, revenue is higher as well at each time slot.





Appendix 7 - Lyft Driver Stats

- The vast majority of Lyft drivers (95%) drive for less than 20 hours per week.
- 96% of Lyft drivers work or study alongside their job as a driver.
- 15% of Lyft drivers are business owners. A further 12% are students.
- More than half of Lyft drivers (51%) also use other ride sharing platforms. 38% work on delivery platforms.

Source: [Lyft](#).