

Comparing Taxis & Rideshares in Chicago

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★ Data

Summary information about every taxi and rideshare (Uber, Lyft, etc.) ride in the city of Chicago:

- Duration
- Distance
- Fare paid
- Start/end location
- Time of day

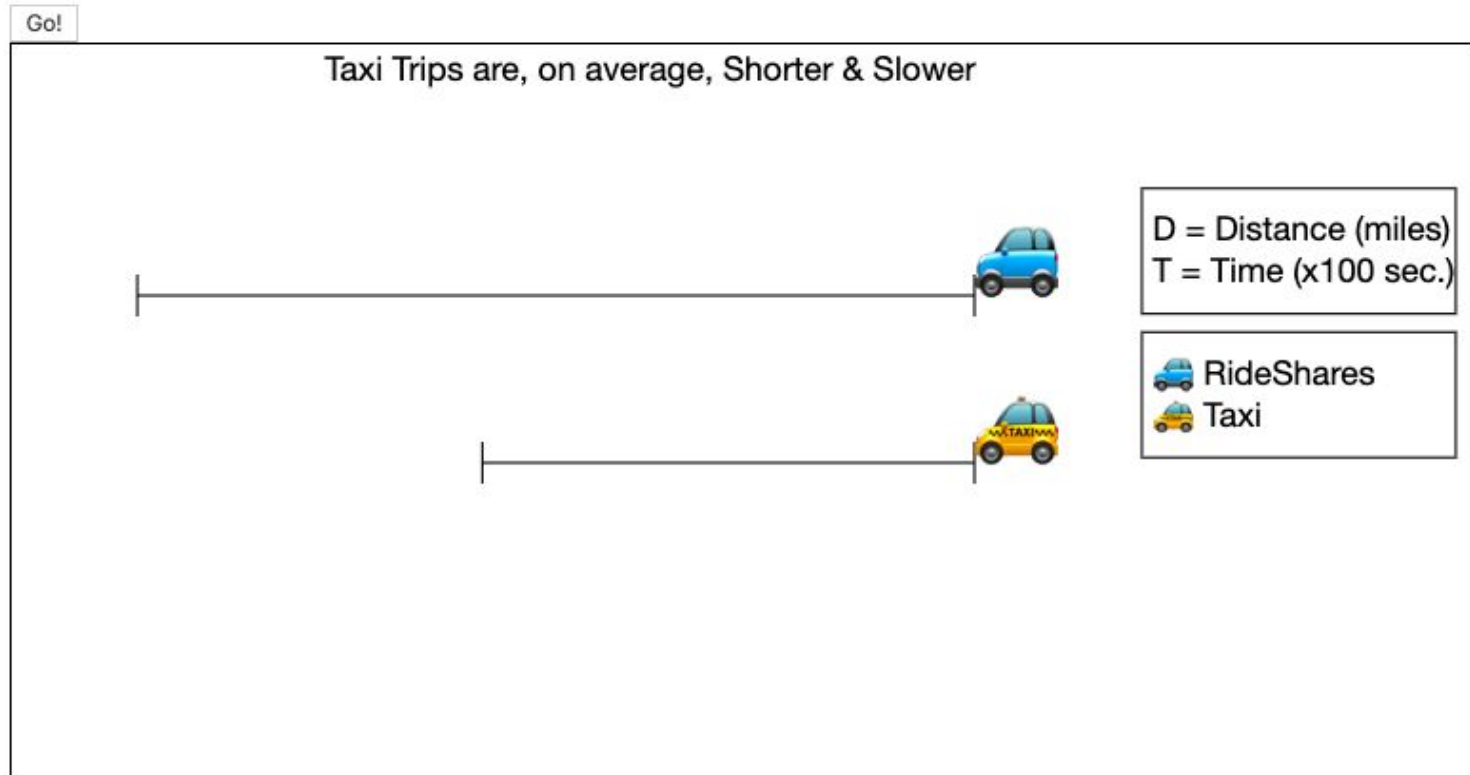


★ Audience & Purpose

Accessible, high-level visualizations to spark curiosity

- Clear **comparison** between taxis and rideshares
- **Variety** of information
- **Simple** visual style

★ Taxis vs. Rideshares - Avg. Distance & Duration



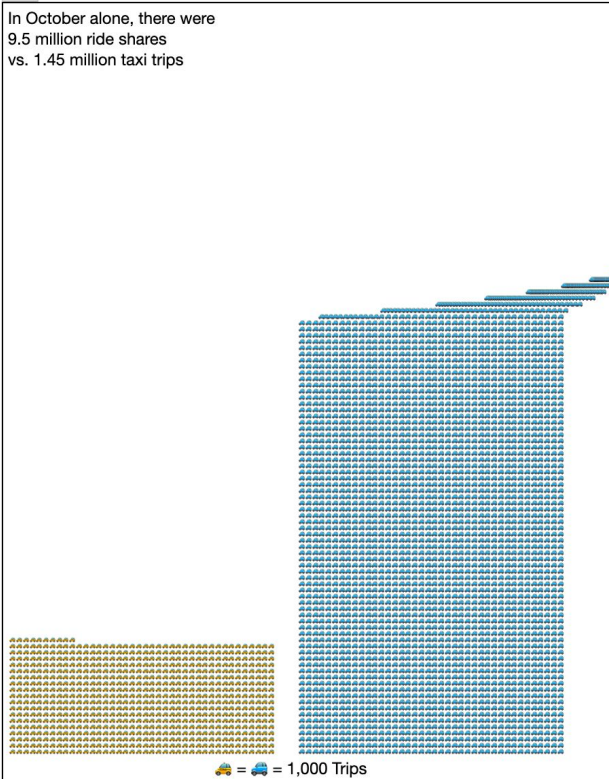
Avg. Distance & Duration ★ Design Rationale

- Length demonstrates difference in distance
- Timers & linear movement show the difference in duration
- Animated objects travelling side-by-side make it obvious that as a result of the above, rideshares are typically faster

★ Total Taxi vs. Rideshare Trips

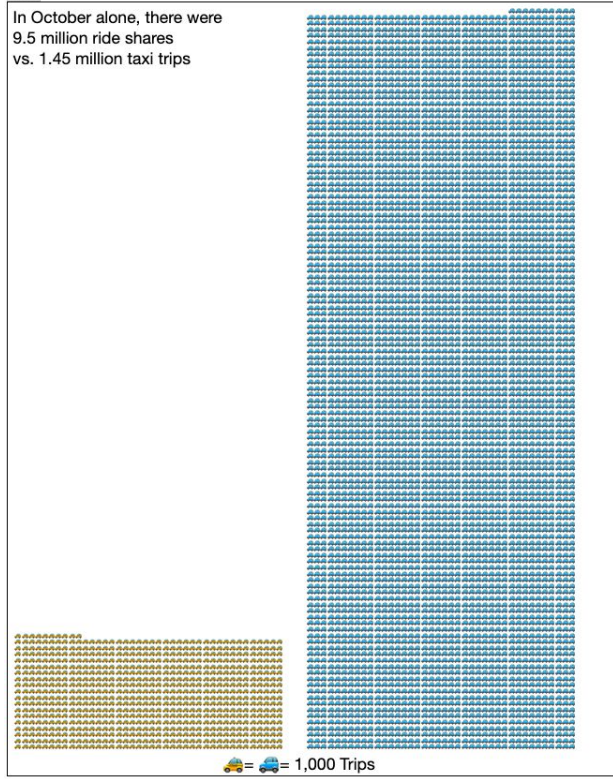
Go!

In October alone, there were
9.5 million ride shares
vs. 1.45 million taxi trips



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Avg. Distance & Duration ★ Design Rationale

- Animated stacking allows for a more 'visceral' experience of both the amount of trips and the difference in quantity between taxis & rideshares

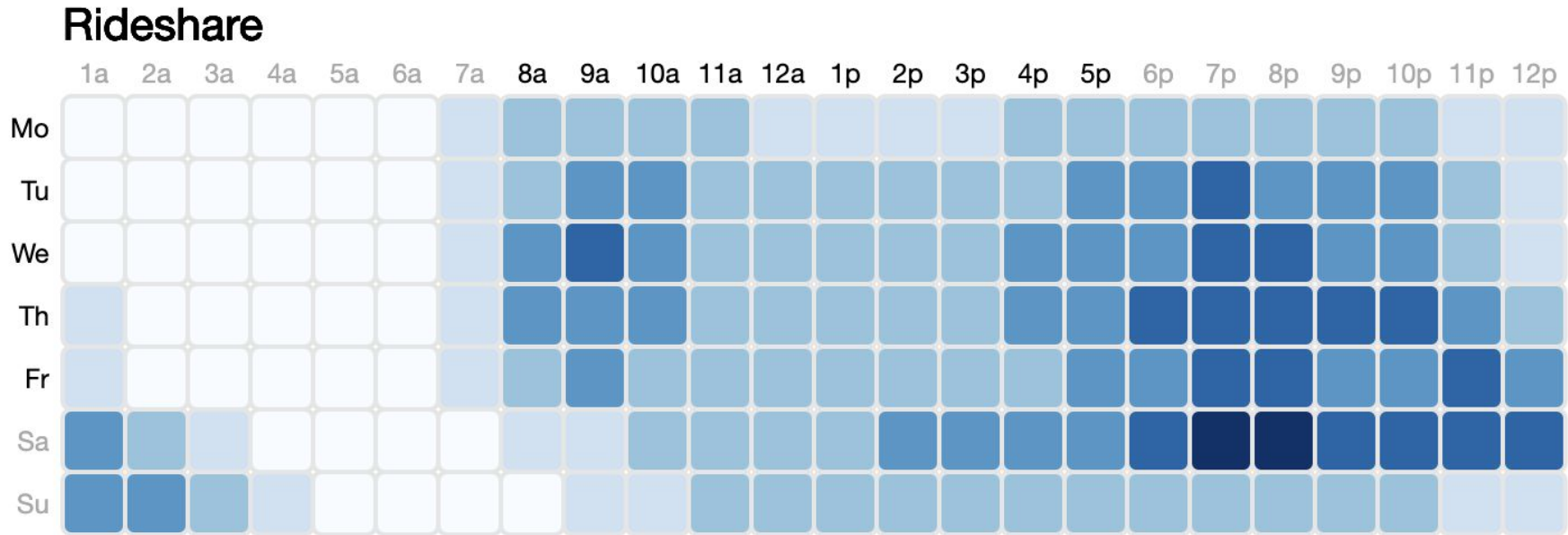
★ Taxis vs. Rideshares By Time of Day

Count

Fare

Distance

Currently displaying: Proportion of total rides by type



Time of Day ★ Analysis

- Wednesday morning hotspot
- Taxis **are** systematically more expensive
- Weekday mornings most expensive time for both
- Short-trip Saturdays

Time of Day ★ Design Rationale

- Comparison: Display both data sets at the same time (perception vs. memory), use of common scale
- Detailed numbers less important than patterns → use of less precise channels (luminance)
- Limited labeling → more detail available on hover

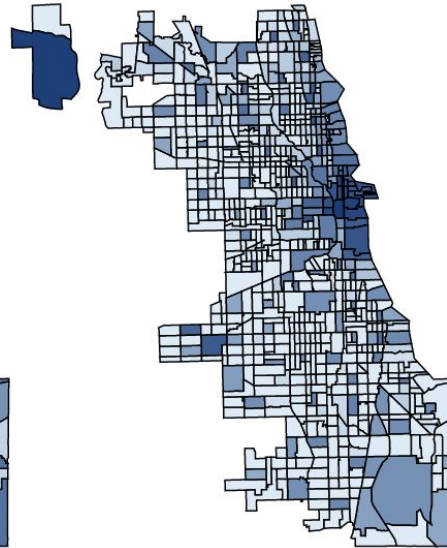
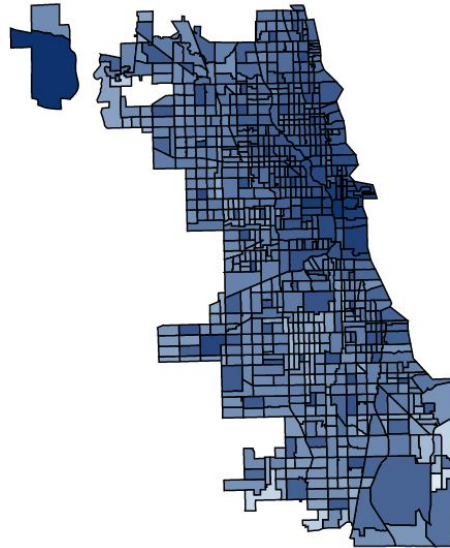
★ Rideshares Overwhelm Taxis in All Locations

Switch Dropoff/Pickup

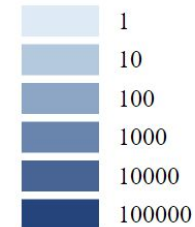
Taxis vs. Rideshares in Chicago - Counts of Rides October 2019

Number of Pickups - Rideshares

Number of Pickups - Taxis



Count of Rides



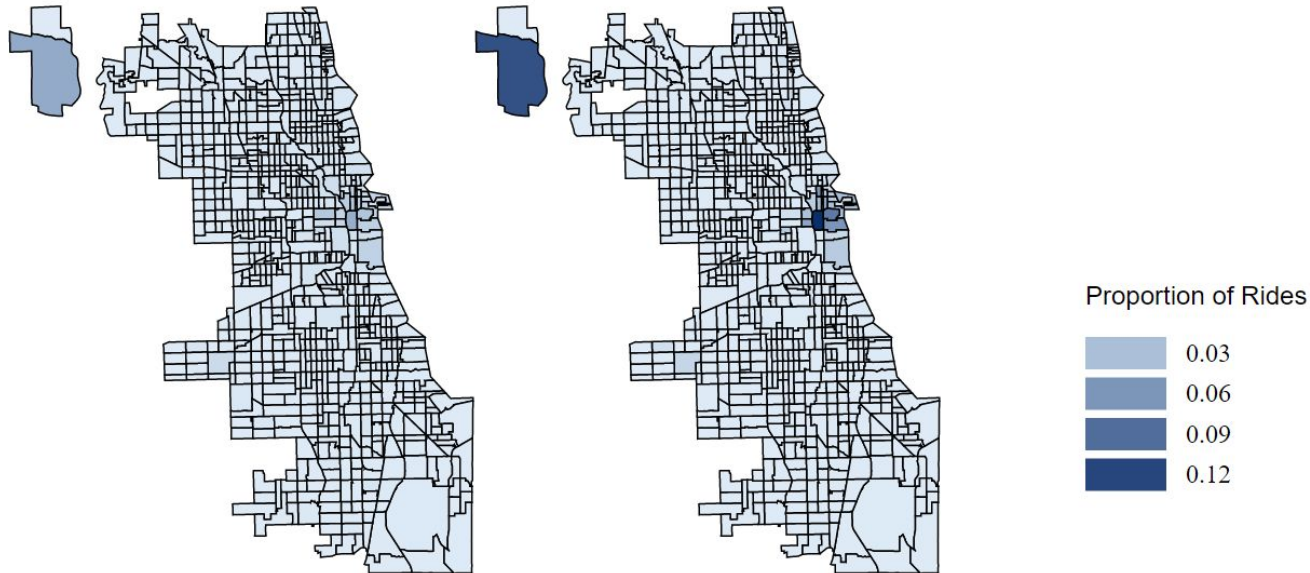
★ Taxis are Typically Downtown and at O'Hare

Switch Dropoff/Pickup

Taxis vs. Rideshares in Chicago - Proportion of Rides October 2019

Proportion of Pickups - Rideshares

Proportion of Pickups - Taxis



Map of Chicago ★ Analysis

- Way more rideshares than taxis
- High proportion of taxis concentrated downtown and at O'Hare
- Rideshares more likely to drive to airport than from; opposite for taxis

Map of Chicago ★ Design Rationale

- Originally envisioned animated vectors showing direction of travel - too busy/difficult
- Map allows us to contextualize where the patterns occur
- Logarithmic color scale necessary because of outlier values
- Difficult to compare two areas, especially when not contiguous

★ City Imposes New Congestion Tax on Rideshares

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PERSONAL FINANCE

SHARE
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Chicago congestion tax on rideshare trips takes effect



UBER

Via

Lyft

Additional \$1.75 Surcharge Between 6am-10pm

01:11 02:26

EMBED MORE VIDEOS

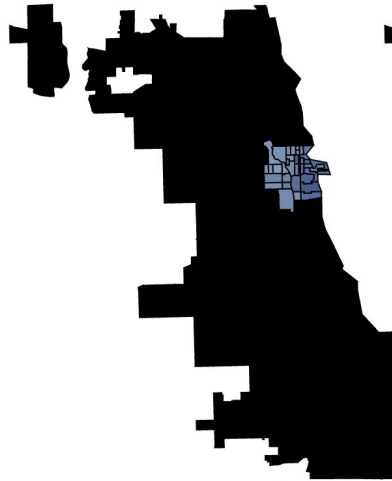
★ City Rideshare Tax Makes Taxi Pickups Cheaper

Switch Dropoff/Pickup

Taxis vs. Rideshares in Downtown Chicago - Ride Fares (M-F) October 2019

Fare of Pickups - Rideshares

Fare of Pickups - Taxis

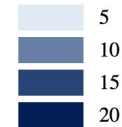


Avg Rideshare Pickup Fare: \$9.81
\$11.56 (with new tax)



Avg Taxi Pickup Fare: \$10.14

Fare (\$)



As of 1/6/20, a surcharge of \$1.75 to rideshares in the downtown area on weekday trips.

City Rideshare Surcharge ★ Analysis

- Before tax, rideshares were considerably cheaper in the business district for pickups/dropoffs
- Taxis have a starker difference in dropoff versus pickup
- After imposed tax, taxi pickups cheaper but dropoffs still more expensive
 - Higher taxi dropoffs from airport

City Rideshare Surcharge ★ Design Rationale

- Map allows to see the stark difference in fares between rideshares and taxis before imposed tax
 - Allow to highlight affected area of the city
- Used saturation to highlight pattern differences while losing precision in data values
- Census tracts may not be the most accessible geographic key

