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Cyclistic Usage Analysis

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Objective

- ▶ Identify the differences in Cyclistic bikes usage between **members** and **casual riders** to provide Executive Team with recommendations to create marketing campaign to attract new members



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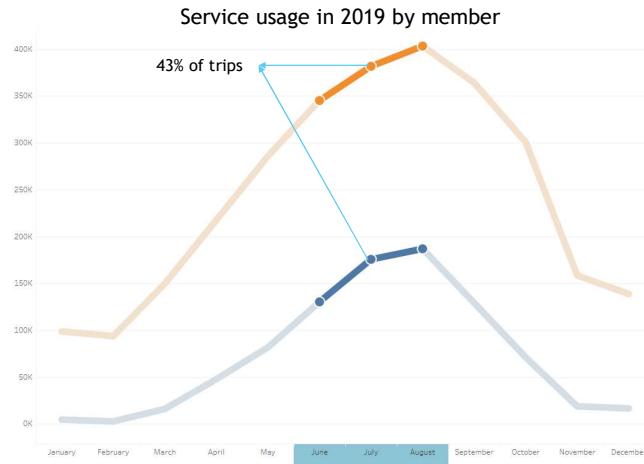
Data used for analysis

- ▶ Monthly trip data provided by Divvy
- ▶ Analyzing data from 2019 (due to ongoing COVID19 pandemic that started March 2020)
- ▶ Patterns identified in this analysis persist in 2020 as well, however it is less pronounced.
- ▶ 2020 comparison charts are provided in an Appendix

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Service usage in 2019

- ▶ A total of 3.8M trips were completed in 2019
- ▶ 43% of all trips were completed during the summer months (June, July, August)
- ▶ **Members** completed 77% of trips (2.9M)
- ▶ Finance analysts have concluded that annual members are more profitable than casual riders



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2019 usage indicators

- ▶ Cyclistic usage by duration is evenly split between members and casual riders.
- ▶ Busiest day for members is Tuesday, whereas casual rode the most on Saturday

User Type	Number of Trips	%	Total Duration (min)	%	Mean Duration (min)	Busiest Day
member	2,937,350	77%	41,878,129	46%	14	Tuesday
casual	880,593	23%	48,938,763	54%	56	Saturday

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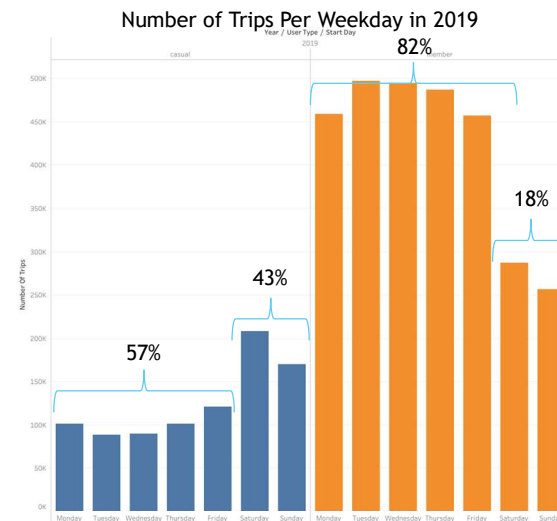
Hypothesis

- ▶ Members use Cyclistic bike sharing service predominantly for commute while casual riders use the service primarily for recreation.
- ▶ To investigate the hypothesis, we will look into the following data points:
 1. Number of trips per weekday
 2. Number of trips per start time
 3. Trip duration patterns
 4. Correlation between time, day of the week and the number of trips
 5. Trips distribution by location

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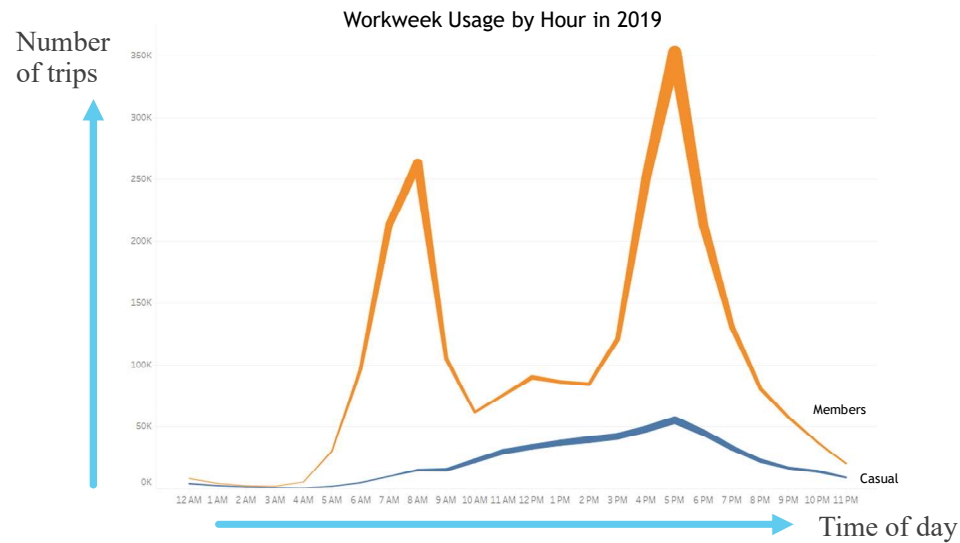
Number of trips

- ▶ **Members** started 82% of trips during the workweek
- ▶ Number of trips started by **members** remains stable throughout the workweek
- ▶ **Casual riders** started 57% of trips during the workweek
- ▶ Service utilization by **casual riders** steadily increases during the workweek, peaking on Saturday



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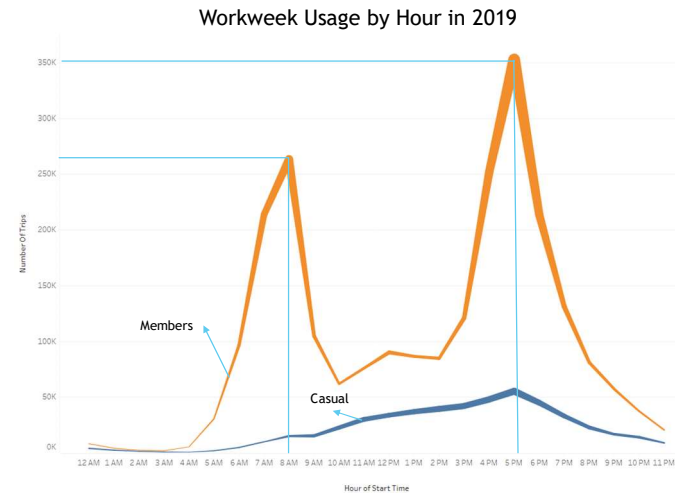
Workweek usage



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Workweek usage

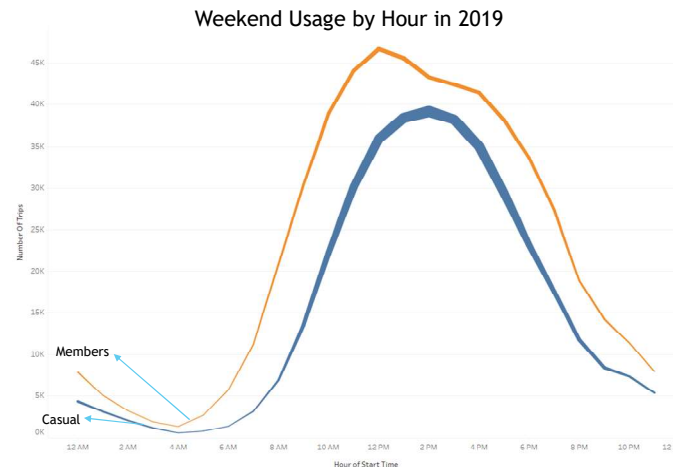
- **Members'** usage peaks at 8AM and then at 5PM
- **Members** started 37% during the busiest times (7AM-9AM, 4PM-6PM)
- **Casual riders'** trips experience a steady increase from 5AM to 5PM and then slow down by 11PM



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Weekend usage

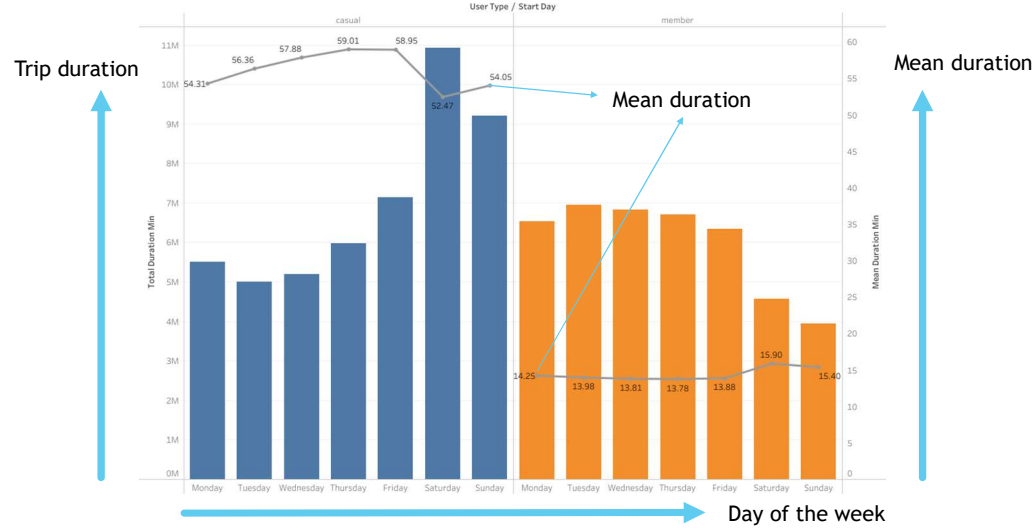
- **Members** and **casual riders** usage patterns are identical during the weekend



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Trip duration

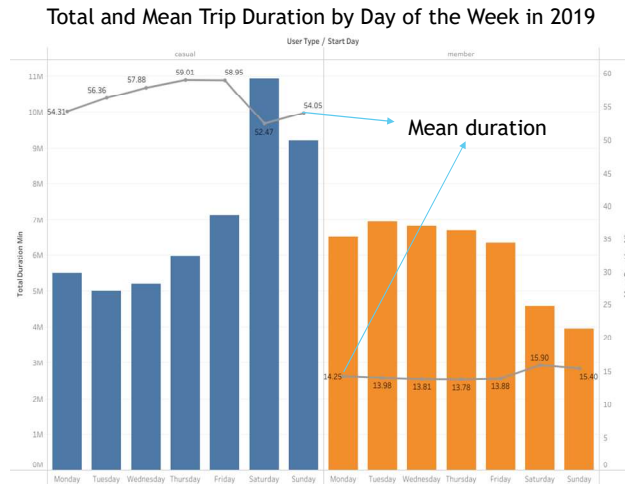
Total and Mean Trip Duration by Day of the Week in 2019



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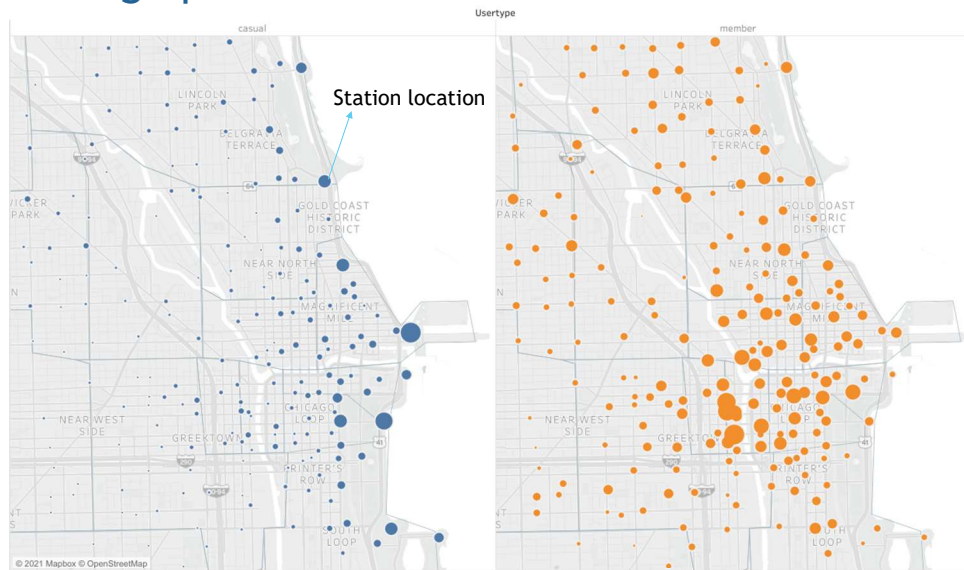
Trip duration

- ▶ Total trip length is increasing for **casual riders** throughout the week, peaking on Saturday
- ▶ Trip length for **members** remains stable Monday through Friday, and decreases during the weekend
- ▶ On average **members** ride 42 minutes less than **casual riders**



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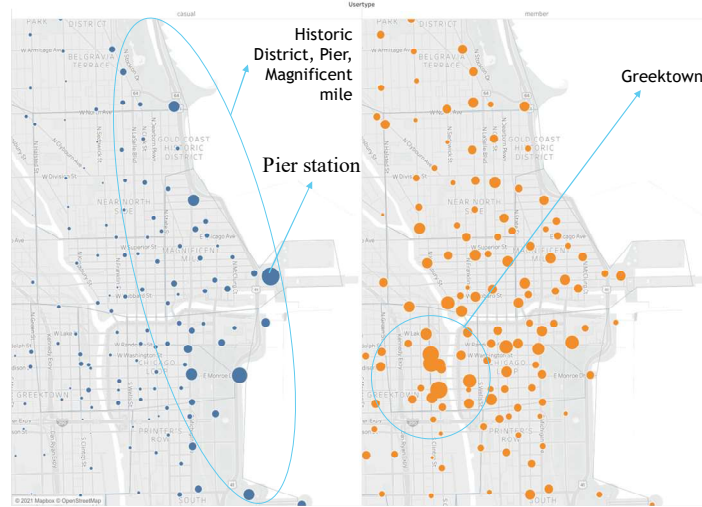
Geographical distribution



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Geographical distribution

Location of Stations Where Trips are Being Started by User Type in 2019



- ▶ Casual riders' trips gravitate towards the shoreline
- ▶ Casual riders started most trips at the Streeter Dr and Grand Ave location at the Pier
- ▶ Members trips evenly distributed in downtown
- ▶ Members started most trips at the Greektown area

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Conclusions

- ▶ Members average ride length is 42 minutes lower than the casual riders
- ▶ Busiest time of day for Members is at 8AM and 5PM during work week
- ▶ Busiest time of day for casual riders is between 12PM and 3PM on weekends
- ▶ Members' start locations are more equally distributed around town
- ▶ Casual riders tend to start their trips in the more scenic area on the shoreline
- ▶ *Evidence suggests that members use service primarily for work commute, whereas casual riders use it as leisure activity

*Does not mean there are no other use cases, further analysis is needed

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Recommendations

- ▶ Conduct a survey among members and casual riders to identify their preferences and use cases for the service
- ▶ Conduct a separate analysis focusing on impact of COVID 19
- ▶ Provide incentives for current casual members to convert to members
- ▶ Work with the Universities in Chicago area to subsidize discounted membership for students, faculty, and staff
- ▶ Send monthly newsletter to current members showing how their usage of bike sharing for commuting helps the environment

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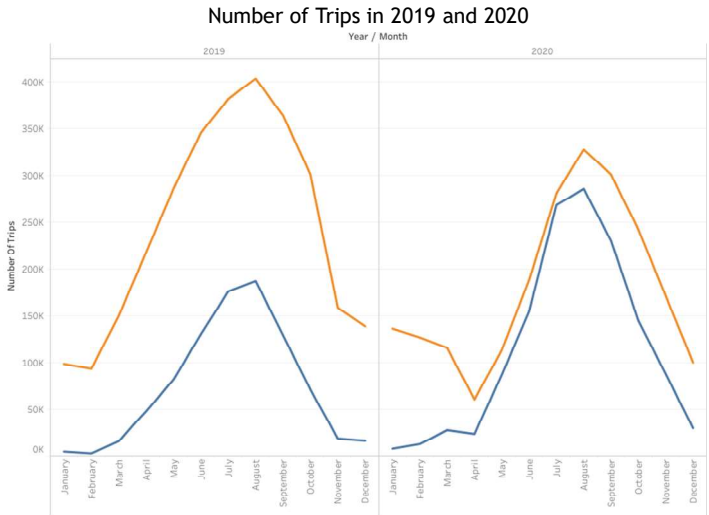
Thank you!



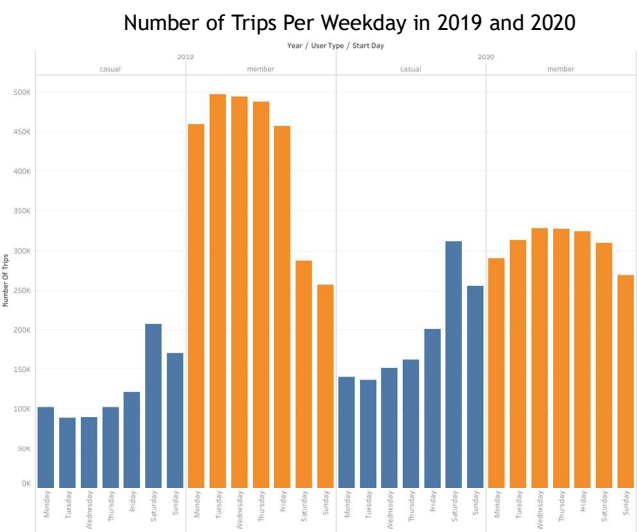
Appendix 1: Usage indicators 2020

Year	User Type	Number of Trips	%	Total Duration (min)	%	Mean Duration (min)	Busiest Day
2019	member	2,937,350	77%	41,878,129	46%	14	Tuesday
2019	casual	880,593	23%	48,938,763	54%	56	Saturday
2020	member	2,162,605	61%	34,123,260	35%	16	Wednesday
2020	casual	1,359,813	39%	64,648,316	65%	48	Saturday

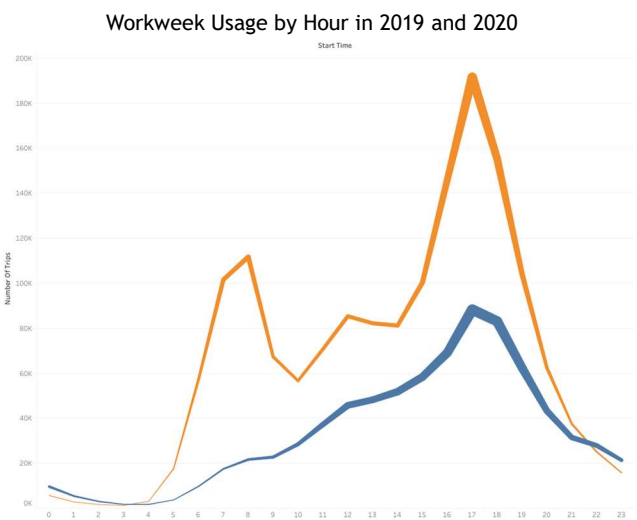
Appendix 2: Number of trips 2020



Appendix 3: Number of trips 2020

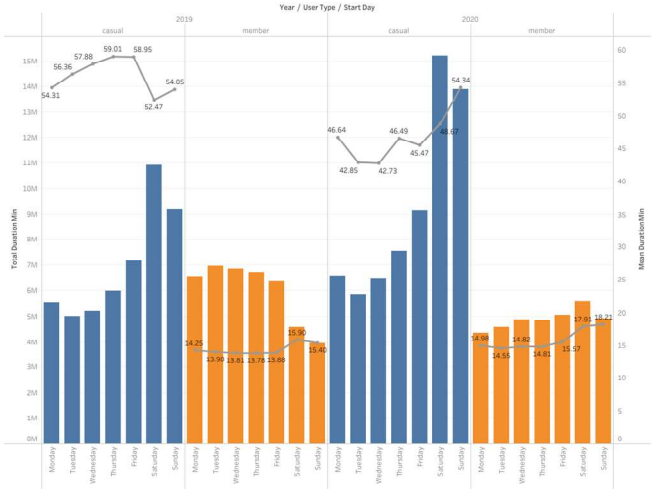


Appendix 4: Workweek usage 2020



Appendix 5: Trip duration 2020

Total and Mean Trip Duration by day of the Week in 2019 and 2020



Appendix 6: Geographical distribution 2020

Location of Stations Where Trips are Being Started by User Type in 2019 and 2020

