Differences between annual members and casual riders on the use of Cyclistic bikes

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What are we talking about

Business task

The goal of this analysis is to **identify and understand the differences in how annual members and casual riders use Cyclistic bikes**, using ride data from **January to December 2024**. These insights will support Cyclistic's marketing strategy by informing efforts **to convert more casual riders into annual members**.

Business task

Objective:

Identify and understand the **differences** in how **annual members** and **casual riders** use Cyclistic bikes.

Differences between members and casual riders:

Analysis results

Remarks

➤ Analysis performed on the monthly rides data based on **5.72 million rides** collected from **January to December 2024**.

➤ **No user data** (user ID, location, age, gender...) except the ability to know whether the user was a member or a casual rider.

The dataset:

➤ **2 types of vehicle**: Classic bike & Electric bike

➤ **Stations**: data on start and end stations.

➤ **Rides**: start and end of each ride.

➤ **User type** : member or casual.

➤ On **weekdays** :

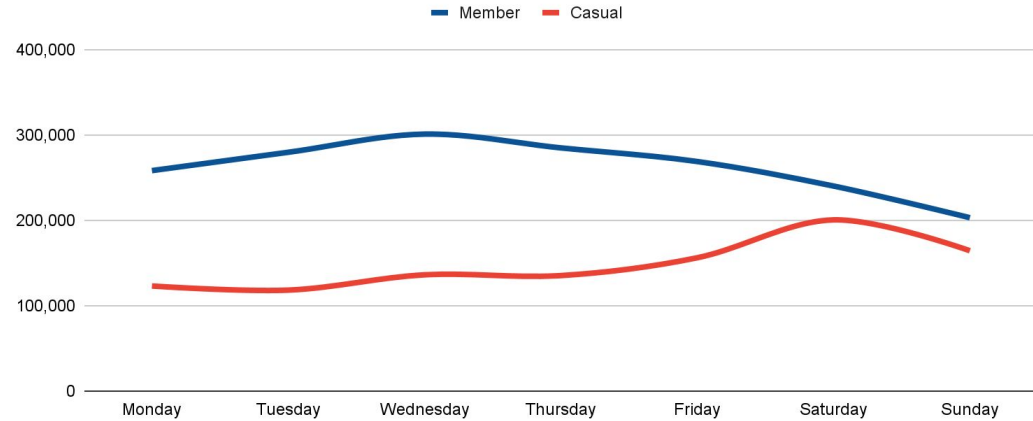- Significantly more member rides than casual rides
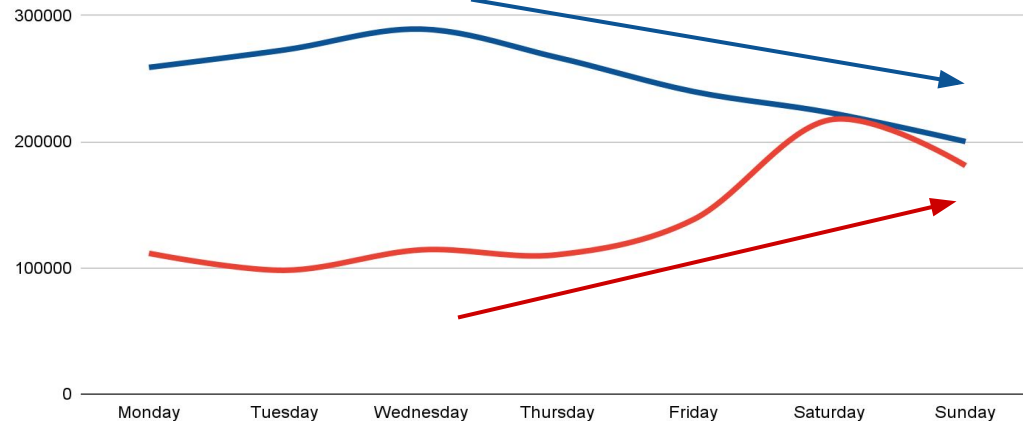
However,

➤ During the **weekend**:

- Casual rides increases (red arrow)
- Member rides decreases (blue arrow)

❖ **Suggest commuting patterns regarding member rides.**

Electric Bike Rides by Day of the Week

— Member   — Casual

400,000	
300,000	
200,000	
100,000	
0	

Monday Tuesday Wednesday Thursday Friday Saturday Sunday

Classic Bike Rides by Day of the Week

300000	
200000	
100000	
0	

Monday Tuesday Wednesday Thursday Friday Saturday Sunday

Cold weather :

- Decrease of both member and casual rides

- **Significant drop of casual rides volume**

Hot weather :

- Increase of both member and casual rides

- **Bigger increase of casual rides** (**+1200%** from January to July 2024) compared to the increase of member rides (+250%*)
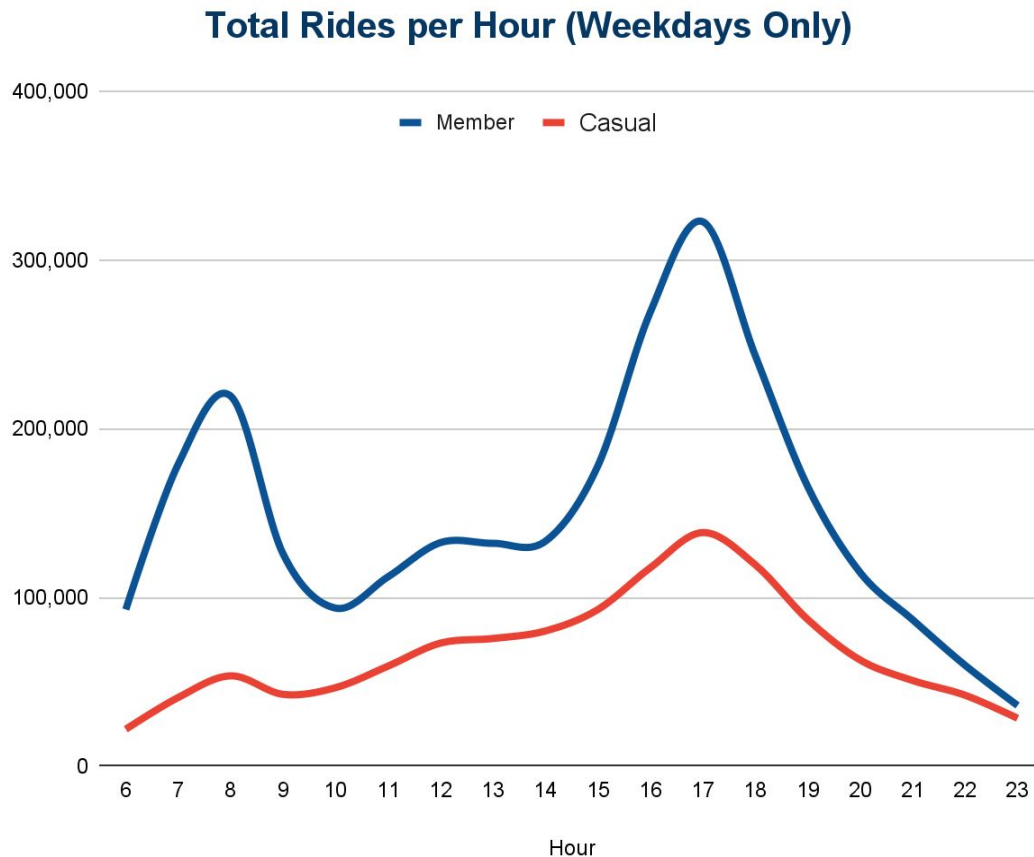
*Difference in the number of rides between January and July 2024

Number of Rides per Month
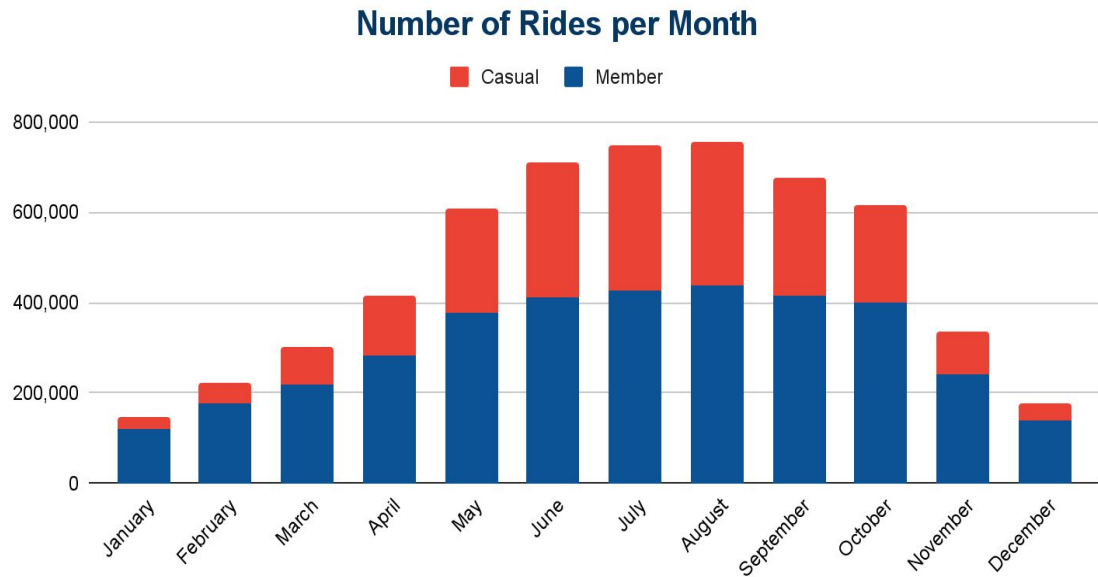
Commute VS leisure:

➤ More rides

➤ **Bigger increase of member rides** (compared to casual rides) especially between 4 & 6 PM

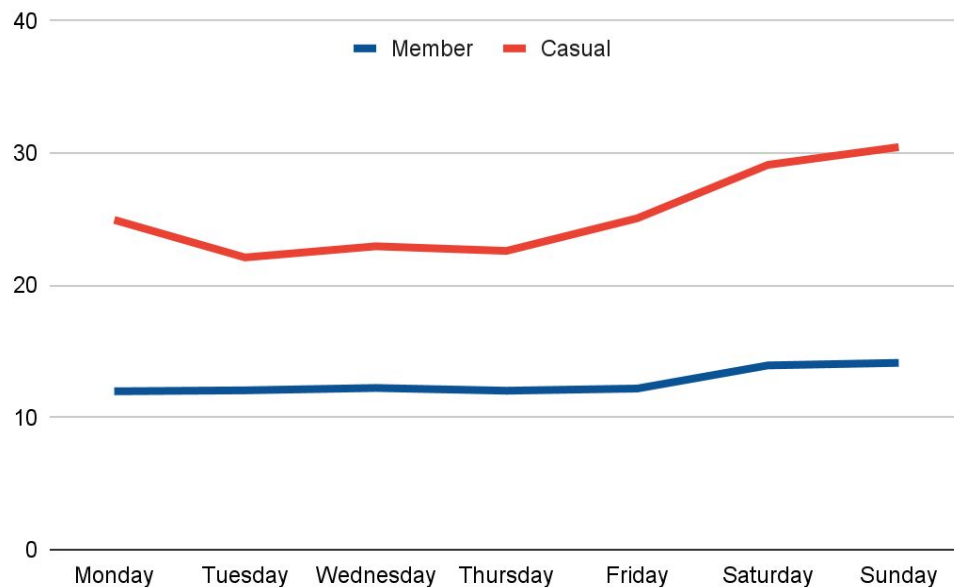## Total Rides per Hour (Weekdays Only)

➤ **Higher average ride length** for **casual riders**.

➤ **Increase** of the average ride length **during the weekend for casual riders**.

➤ **Members** have a **consistent and lower average ride length** compared to casual riders.
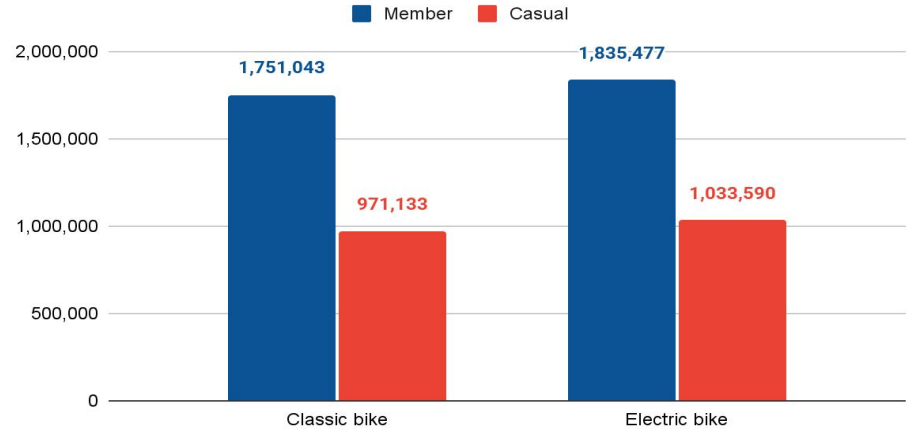
Average Ride Length per Day of the Week (in minutes)
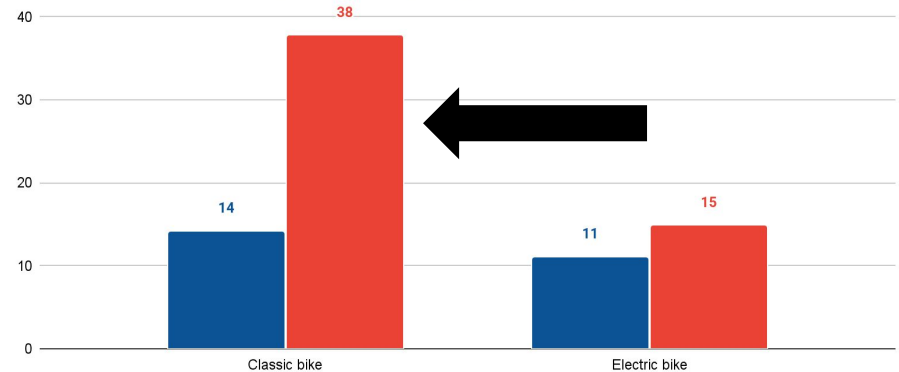
➤ **Less casual rides** than member rides

➤ **Longer average ride length** for **casual rides** (especially for classic bike rides)

- Why do casual rides tend to be longer with classic bikes ?

Total Rides by Vehicle

■ Member ■ Casual

	Classic bike	Electric bike
Member	1,751,043	1,835,477
Casual	971,133	1,033,590

2,000,000 / 1,500,000 / 1,000,000 / 500,000 / 0

Average Ride Length by Vehicle (in minutes)

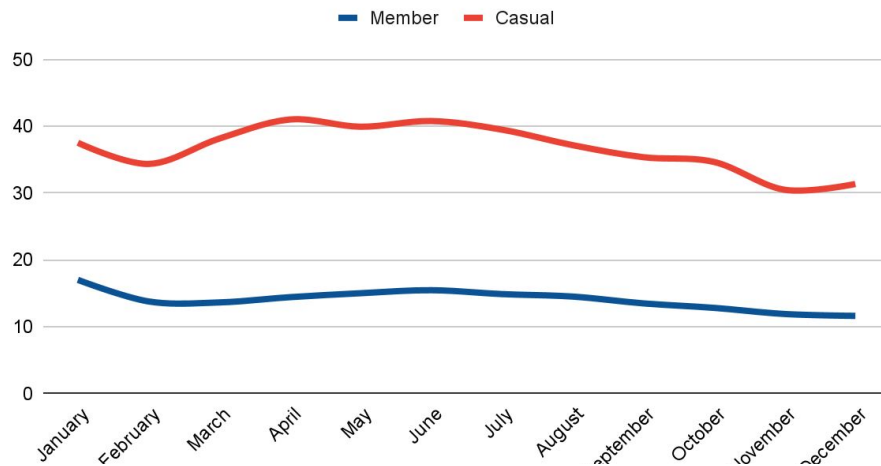|	Classic bike	Electric bike
Member	14	11
Casual	38	15

40 / 30 / 20 / 10 / 0

Casual riders and classic bikes:

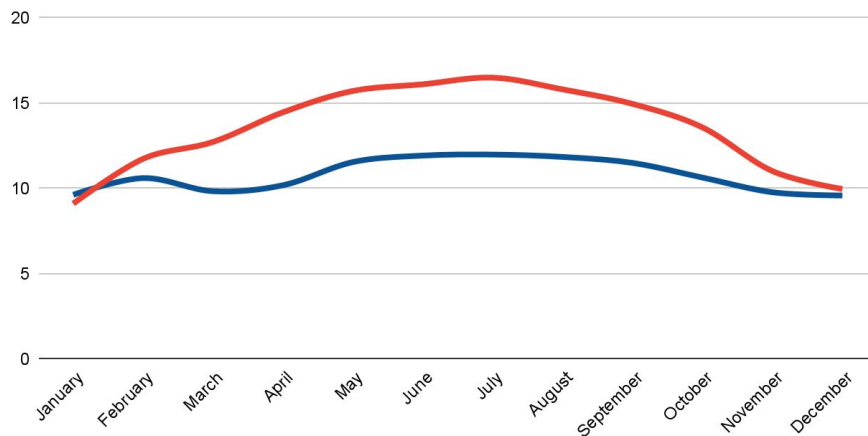➤ **Longer average ride length** on **classic bikes**.

➤ Longer average ride length on **electric bikes during summer**.

◆ Hypothesis : **casual** riders may favor **classic bikes for leisure and tourism** activities, potentially resulting in **longer ride** durations.

Classic Bike Average Ride Length by Month (in minutes)

— Member — Casual

50
40
30
20
10
0

January February March April May June July August September October November December

Electric Bike Average Ride Length by Month (in minutes)

20
15
10
5
0

January February March April May June July August September October November December
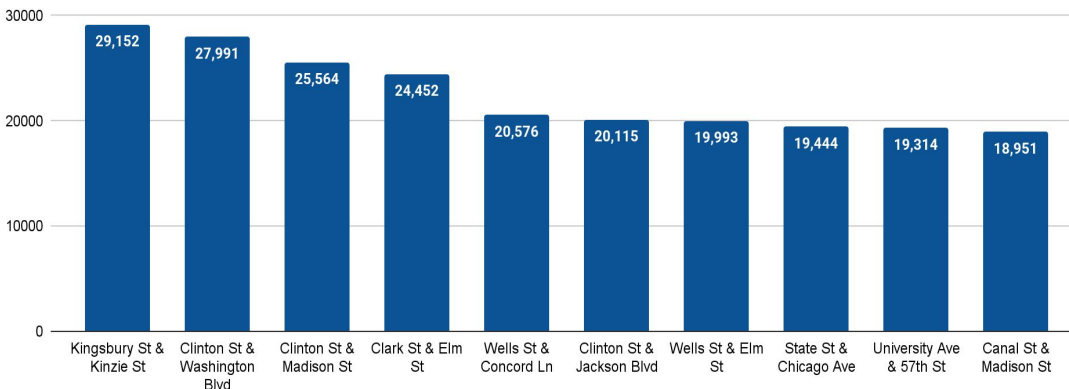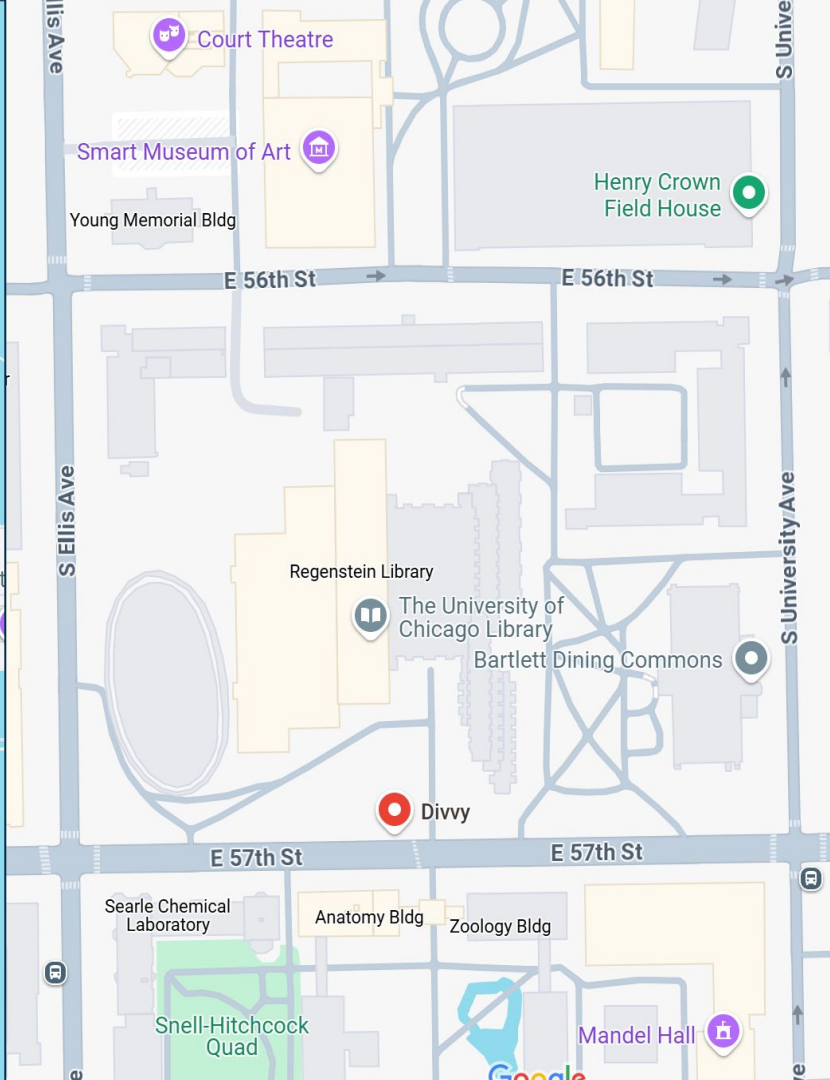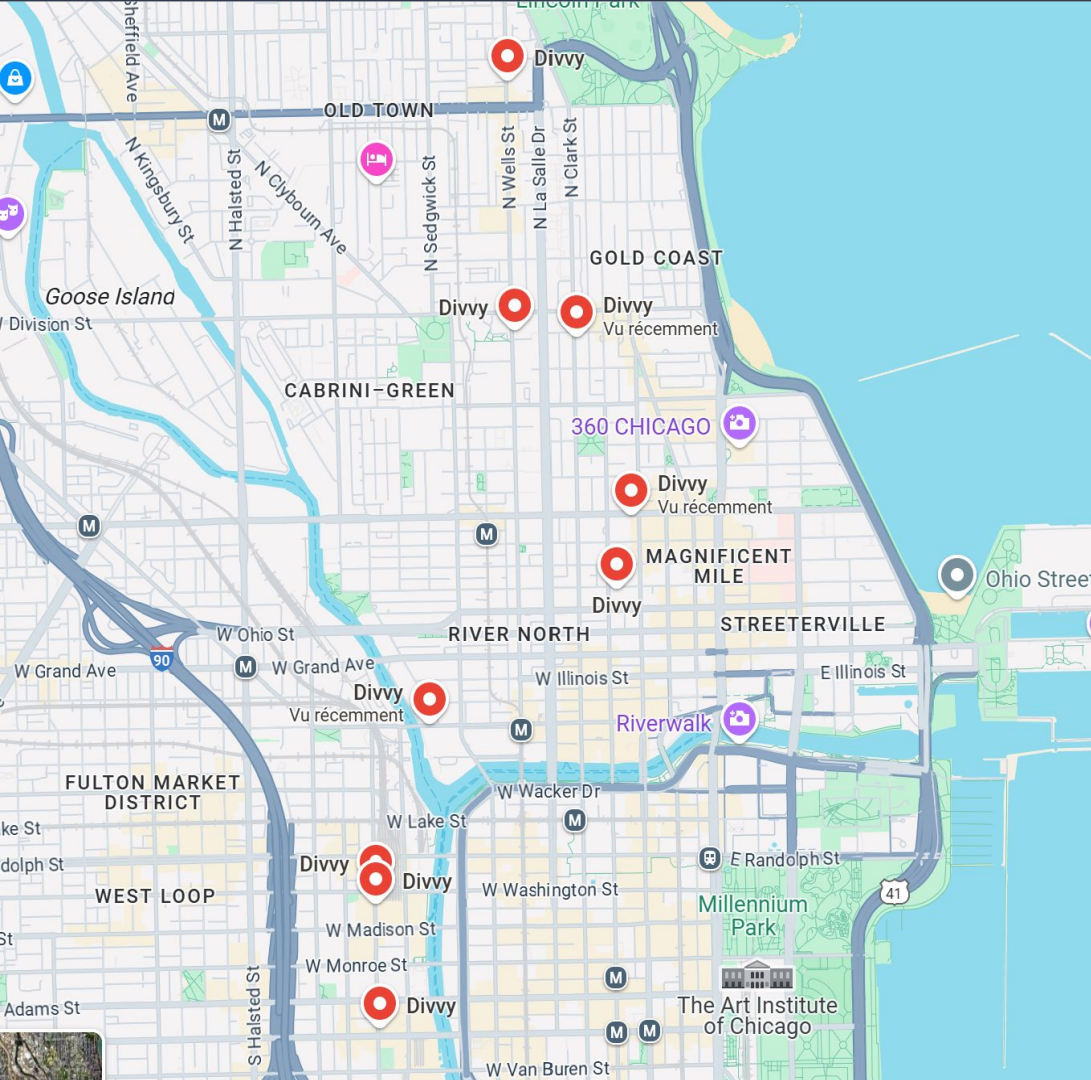
Member rides:

➤ Even spread across the 10 start and end stations with the most member rides.

➤ Stations with the highest number of rides are located close to workplaces.

Top 10 Start Stations with the Highest Number of Member Rides

Station	Rides
Kingsbury St & Kinzie St	28,996
Clinton St & Washington Blvd	27,329
Clinton St & Madison St	24,500
Clark St & Elm St	24,414
Wells St & Concord Ln	20,422
Wells St & Elm St	20,221
Clinton St & Jackson Blvd	19,982
Dearborn St & Erie St	19,293
University Ave & 57th St	18,965
State St & Chicago Ave	18,784

Top 10 End Stations with the Highest Number of Member Rides

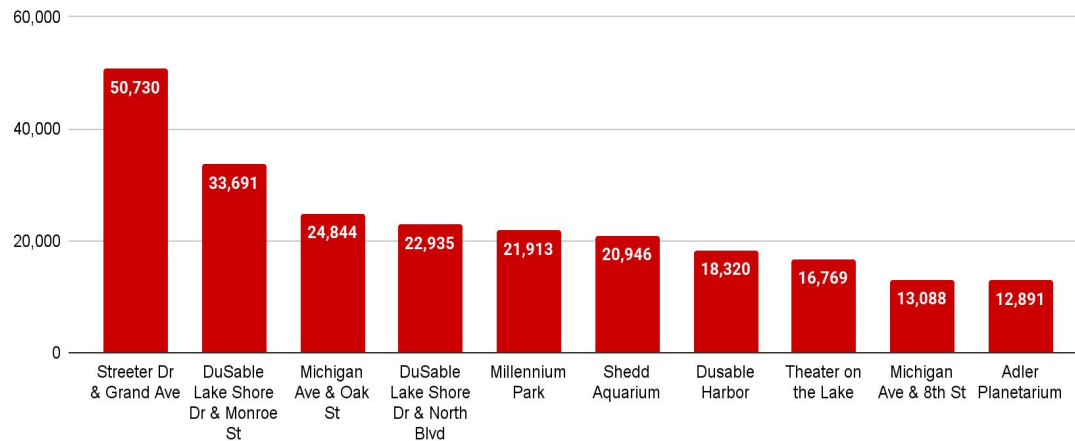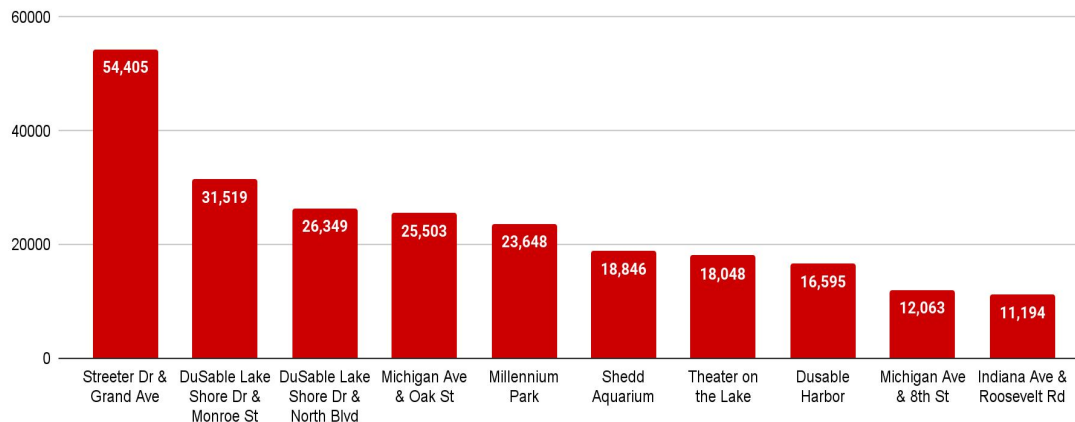| Station	Rides
Kingsbury St & Kinzie St	29,152
Clinton St & Washington Blvd	27,991
Clinton St & Madison St	25,564
Clark St & Elm St	24,452
Wells St & Concord Ln	20,576
Clinton St & Jackson Blvd	20,115
Wells St & Elm St	19,993
State St & Chicago Ave	19,444
University Ave & 57th St	19,314
Canal St & Madison St	18,951

Casual rides:

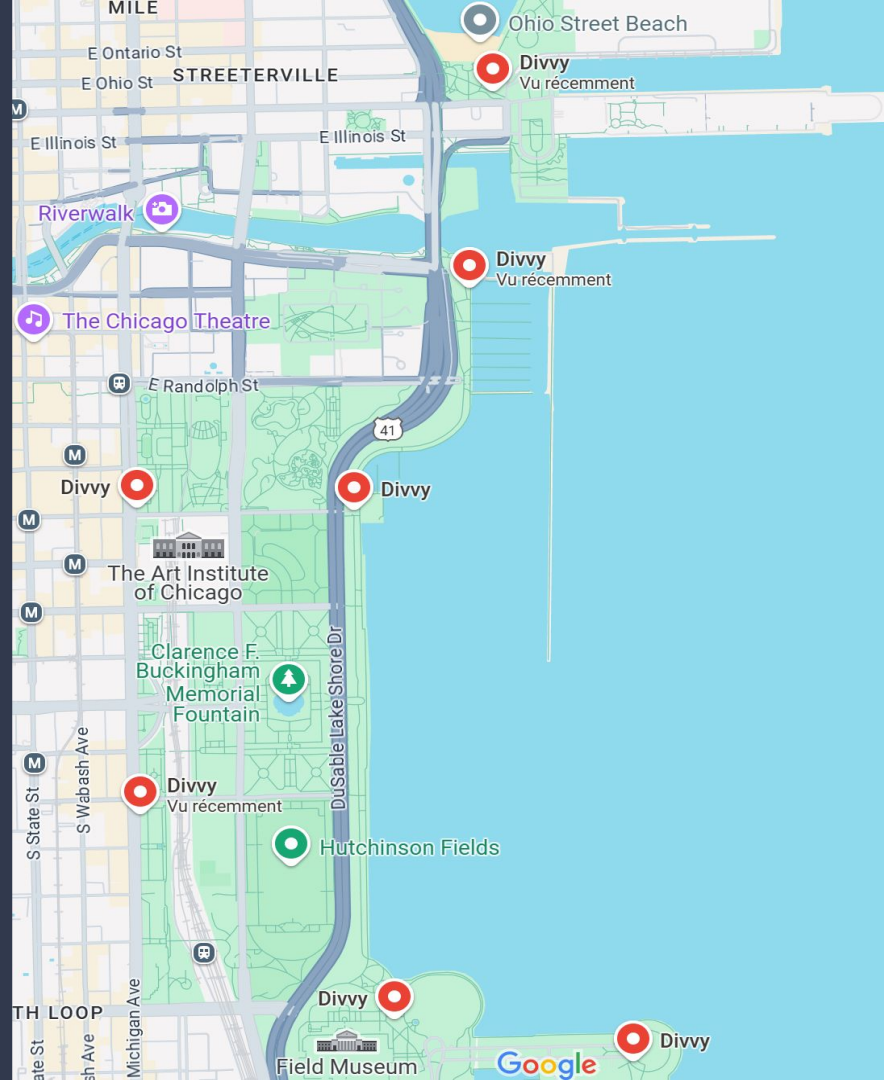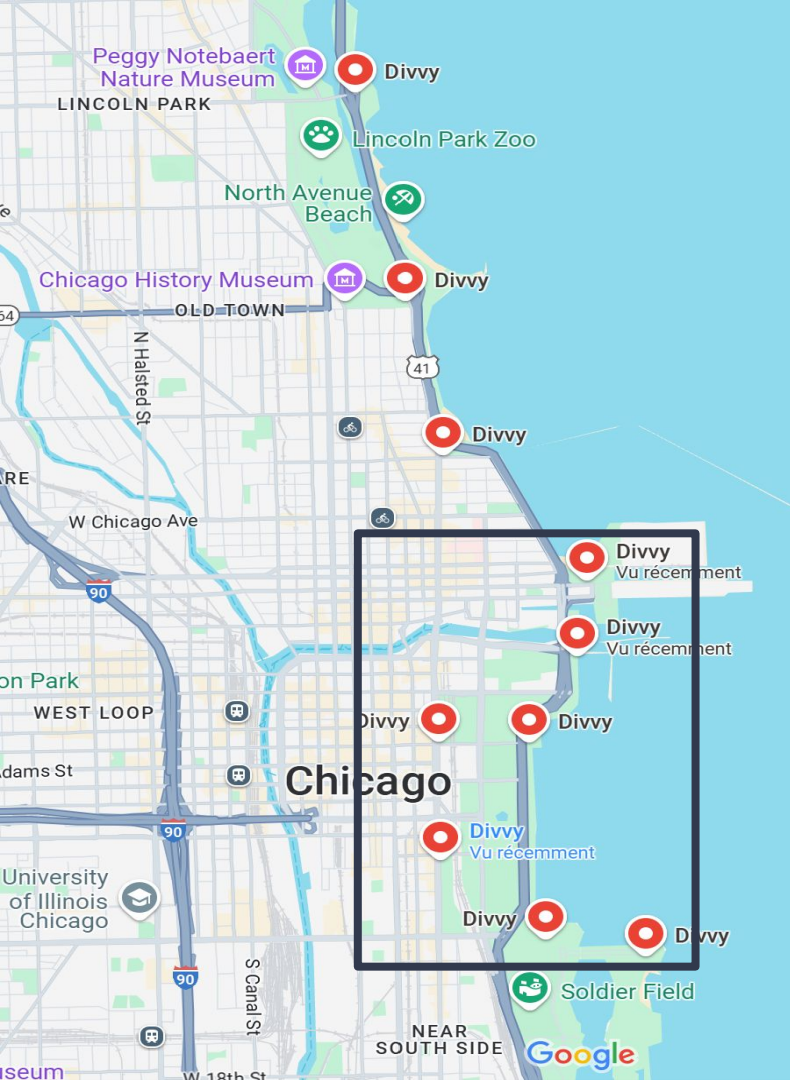➤ Uneven spread across the 10 start and end stations with the most casual rides.

➤ Stations with the highest number of rides are located close to tourist spots.

Top 10 Start Stations with the Highest Number of Casual Rides

Station	Value
Streeter Dr & Grand Ave	50,730
DuSable Lake Shore Dr & Monroe St	33,691
Michigan Ave & Oak St	24,844
DuSable Lake Shore Dr & North Blvd	22,935
Millennium Park	21,913
Shedd Aquarium	20,946
Dusable Harbor	18,320
Theater on the Lake	16,769
Michigan Ave & 8th St	13,088
Adler Planetarium	12,891

Top 10 End Stations with the Highest Number of Casual Rides

Station	Value
Streeter Dr & Grand Ave	54,405
DuSable Lake Shore Dr & Monroe St	31,519
DuSable Lake Shore Dr & North Blvd	26,349
Michigan Ave & Oak St	25,503
Millennium Park	23,648
Shedd Aquarium	18,846
Theater on the Lake	18,048
Dusable Harbor	16,595
Michigan Ave & 8th St	12,063
Indiana Ave & Roosevelt Rd	11,194

Conclusion

Key takeaways

Annual members

Rides number in the **weekend** : **decrease**

Rides number in the summer : increase

Rides during **commute hours** : **peak**

Ride length : consistent throughout the week and short on average

Use bike **stations near workplaces**

Casual riders

Rides number in the **weekend** : **increase**

Rides number in the **summer** : **great increase**

Rides during commute hours : small increase

Ride length : increase on weekends and **longer** on average (**especially for classic bikes** ➤ leisure & tourism)

Use bike **stations near tourist hotspots**

Key takeaways

	Annual members	Casual riders
Number of rides in the **weekend**	**Decrease**	**Increase**
Number of rides in the **summer**	Increase	**Great increase**
Rides during **commute hours**	**Peak**	Slight increase
Ride **length**	Consistent throughout the week and short on average	Increase on weekends and **longer** on average (**especially for classic bikes** ➤ leisure & tourism)
Stations are near	**Workplaces**	**Tourist hotspots**

1. Seasonal & Timing–Based Offers:

Based on insights that casual rides spike during summer and weekends.

➤ Free trial memberships during peak months (summer)

➤ Weekend-only discounts for new members

➤ Promotions during good-weather days via app notifications

2. Location-Based Incentives:

Based on observation that casual rides cluster near tourist hotspots.

➤ Exclusive member discounts at high-tourism stations

➤ "Ride more, save more" offers for rides starting or ending near attractions

➤ Membership trial booths at popular tourist stations

3. Bike-Type Perks:

Based on longer casual rides using classic bikes for leisure.

➤ Unlimited 45-min rides on classic bikes for members

➤ Discounted day passes on classic bikes as membership teaser

Recommendations to Convert Casual Riders into Members:

Strategy	Initiative Examples
☀️ Seasonal Offers	- Free trials in summer - Weekend discounts for new members - Good weather promotions (in-app notifications)
📍 Location Based Deals	- Tourist station ride deals - On-site promo booths
🚲 Bike-Type Perks	- Unlimited classic bike rides - Classic bike tour bundle