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GENDERED EXPERIENCES IN THE CITY:
AN ANALYSIS OF CHICAGO

Final Presentation for
Neighborhood Analysis

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QUESTION

What are the differences between male and female experiences in the city?

LIMITATIONS

LACK OF GENDERED DATA

Very few data sets include gender information, and even fewer of those are made public.

HARD TO ILLUSTRATE QUALITATIVE DATA

Many of the subsequent questions regarding gendered experiences in the city fall under qualitative data which are difficult to collect and difficult to illustrate.

EVOLVING GENDER IDENTITIES

Evolving gender identities and increased gender fluidity complicate the collection and analysis of gendered data.

Divvy Data

- Bike share data for subscribed users in Chicago
- 2015 - 2018
- Trip start and end location, start and end time, trip duration, user gender, user birthdate, and station location
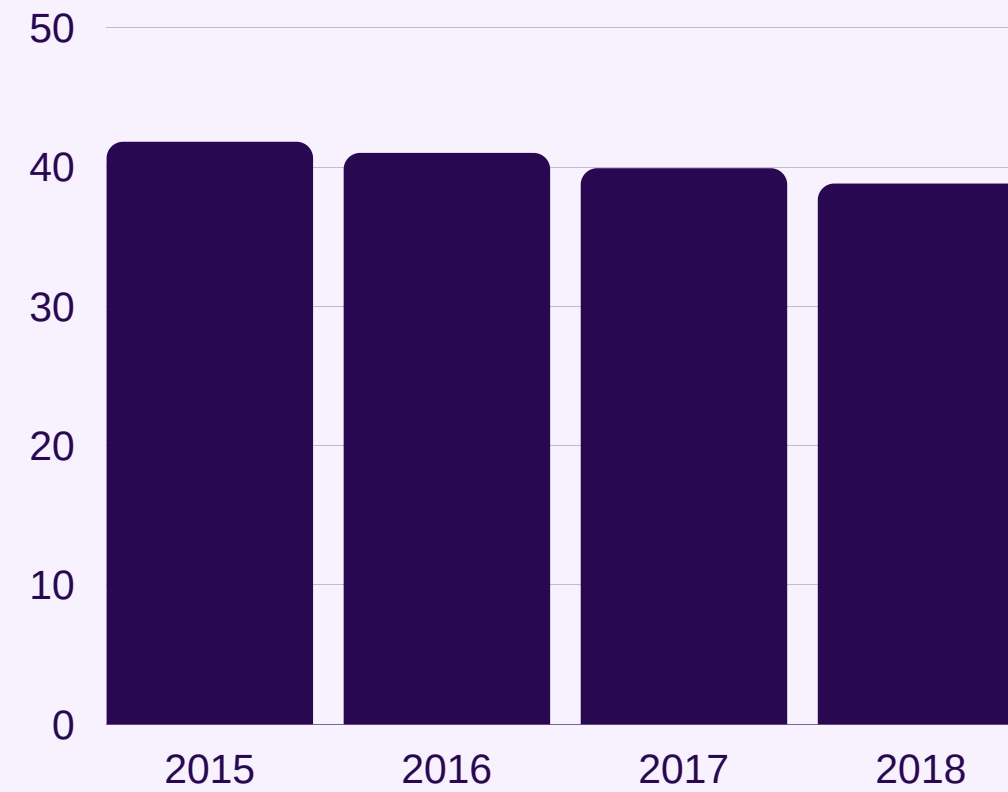
Twitter Data

- Tweet text
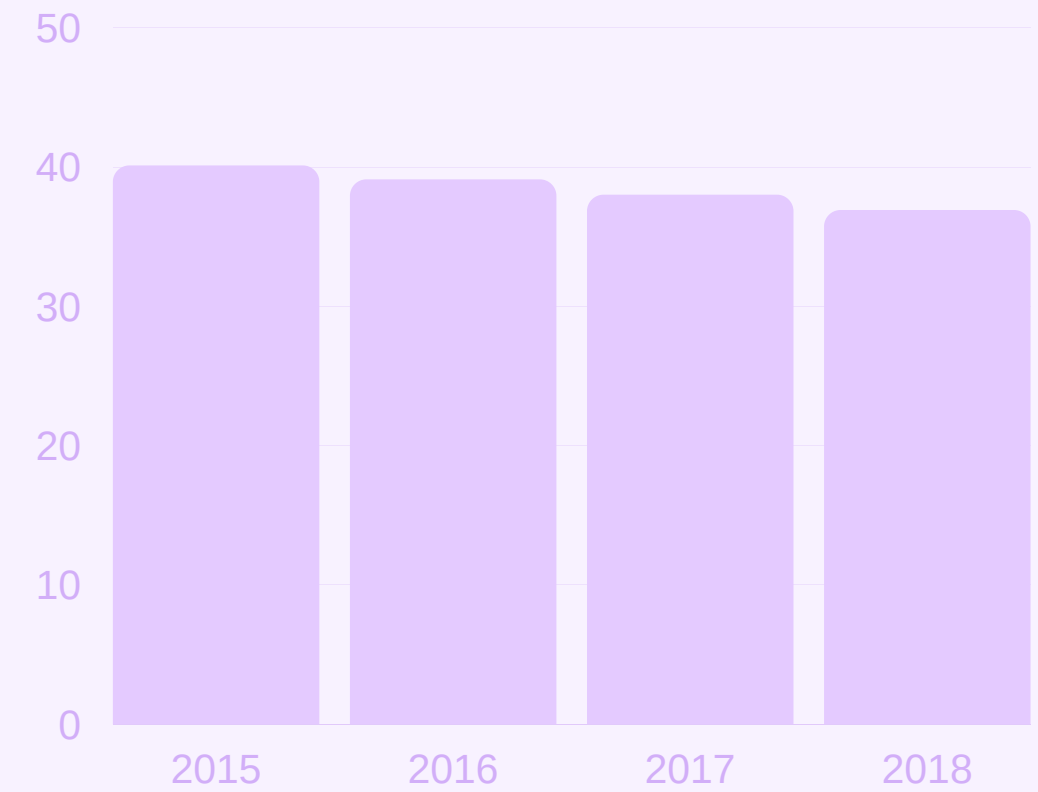- User name
- Tweet location
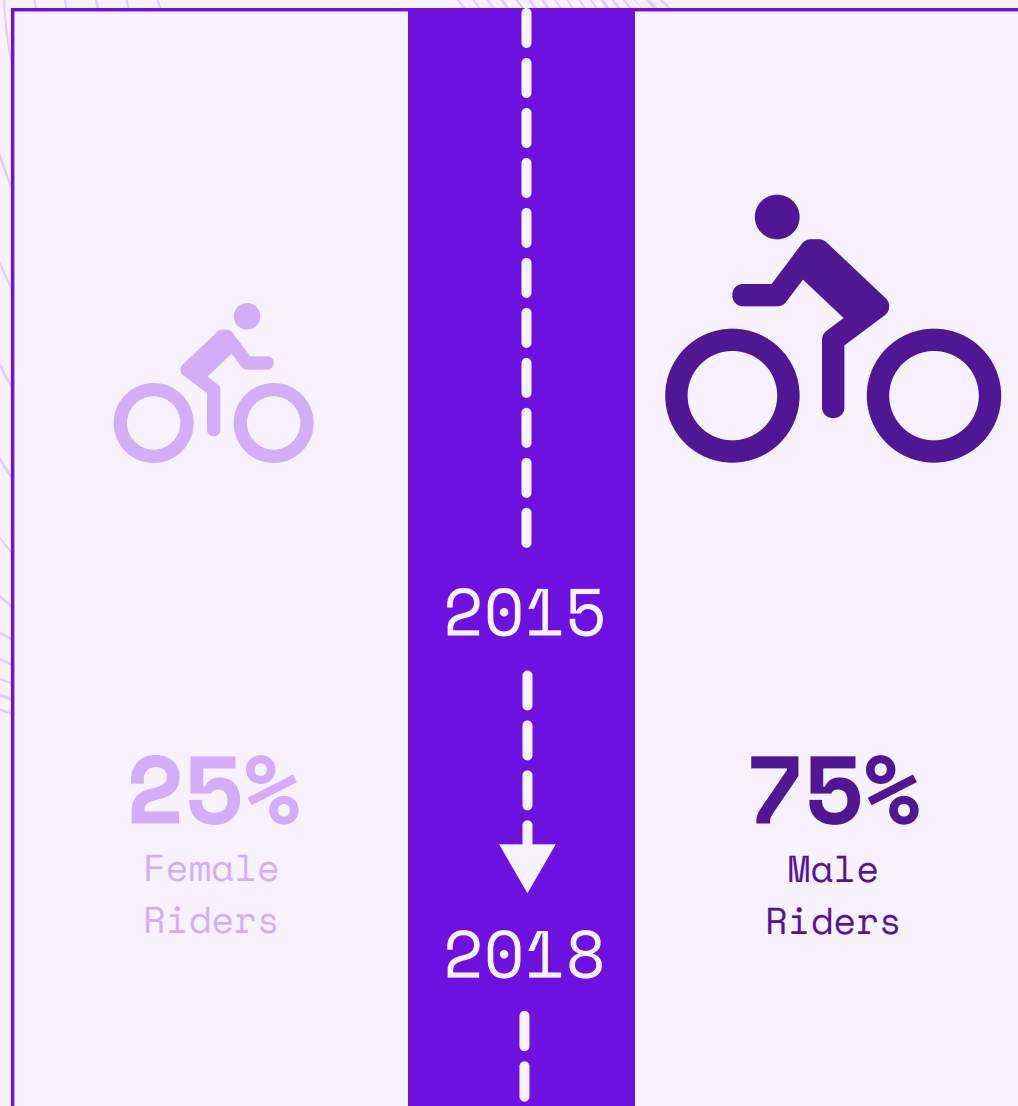
DIVVY USERSHIP ANALYSIS

- 11,000,000+ trips over 4 years
- Steady increase in users since 2015
- Almost 600 stations within the City of Chicago

2015

2018

25%
Female Riders

75%
Male Riders

AGE DISTRIBUTION
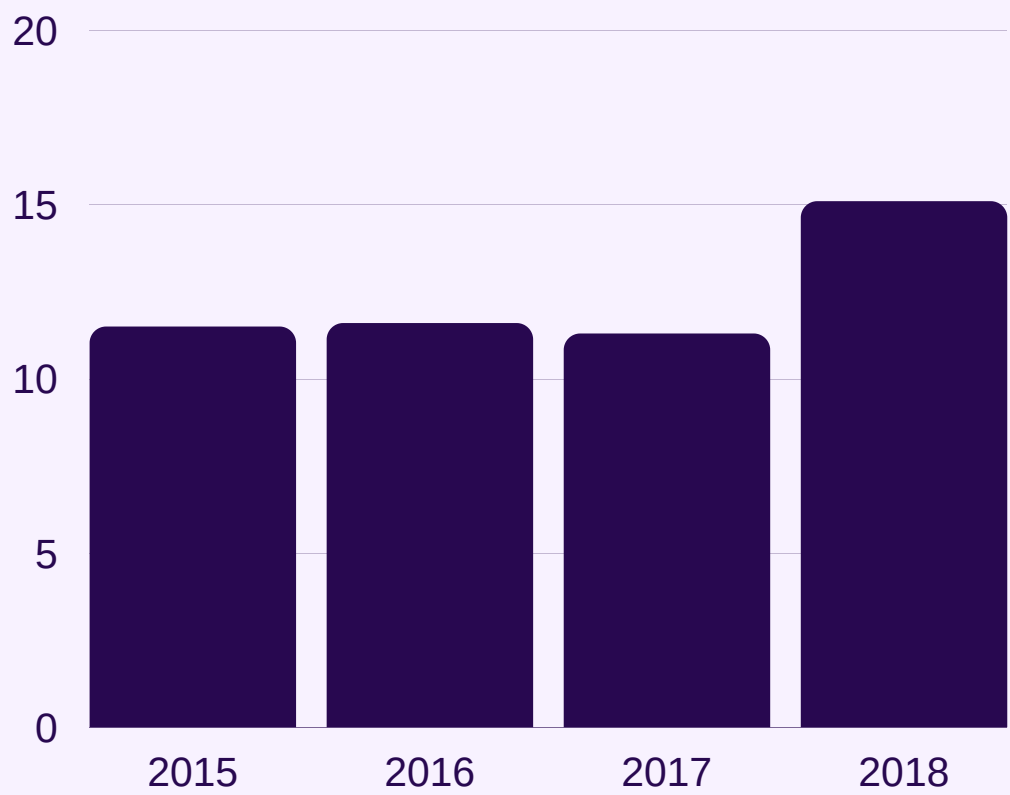

AVERAGE AGE OF MALE USERS

Divvy bike riders' age in years from 2015 - 2018
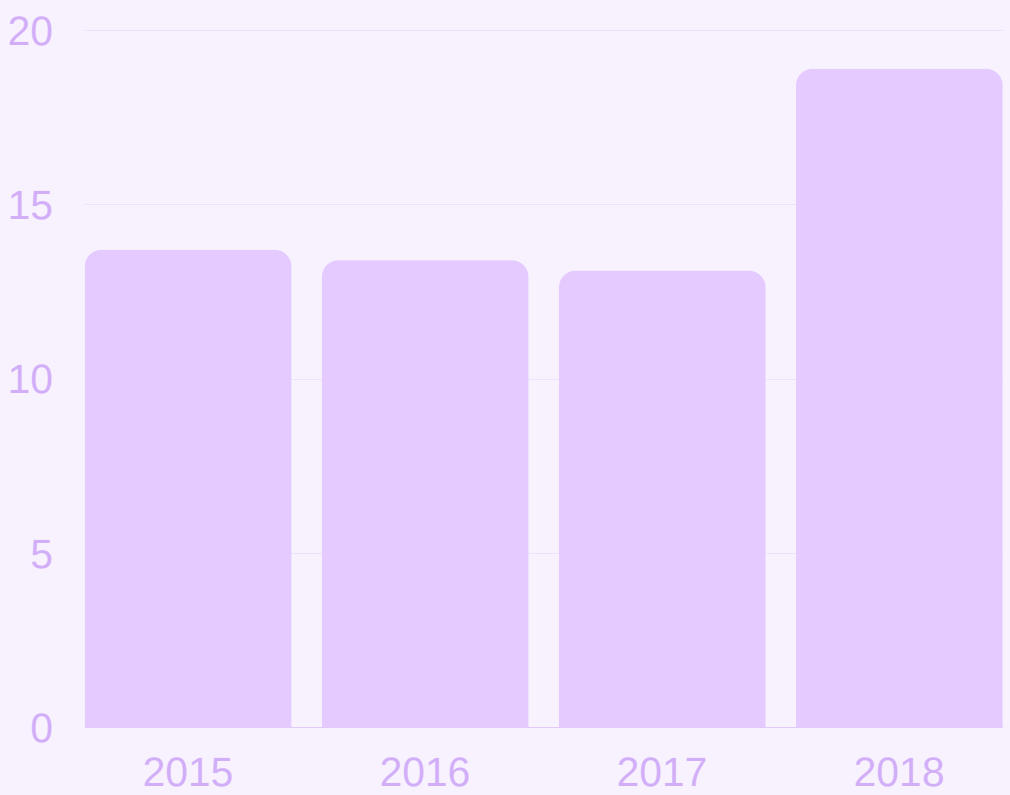
AVERAGE AGE OF FEMALE USERS

Divvy bike riders' age in years from 2015 - 2018

TRIP LENGTH DISTRIBUTION

AVERAGE DURATION OF MALE TRIPS

Divvy bike trip duration in minutes
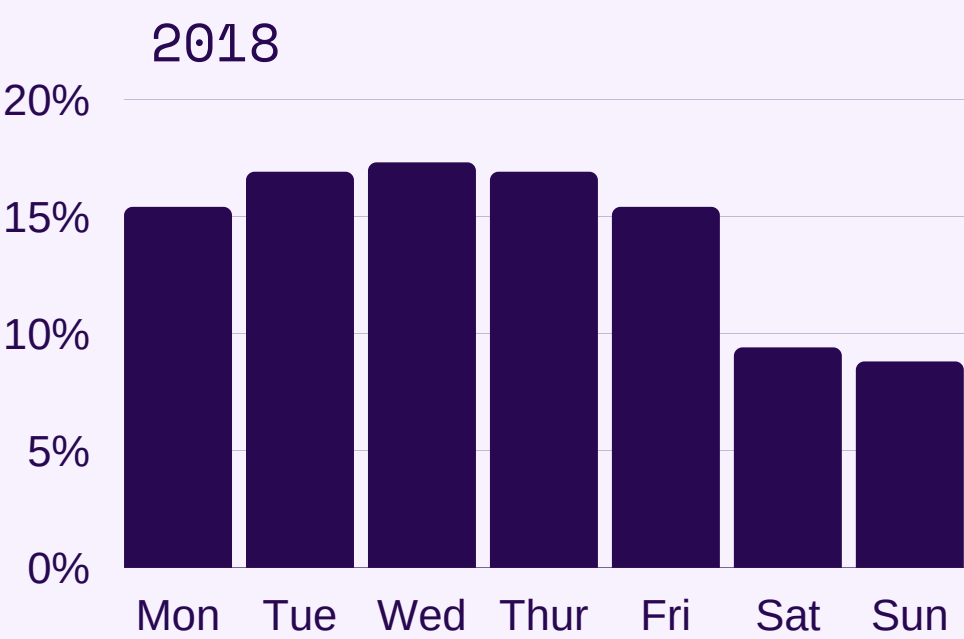from 2015 - 2018
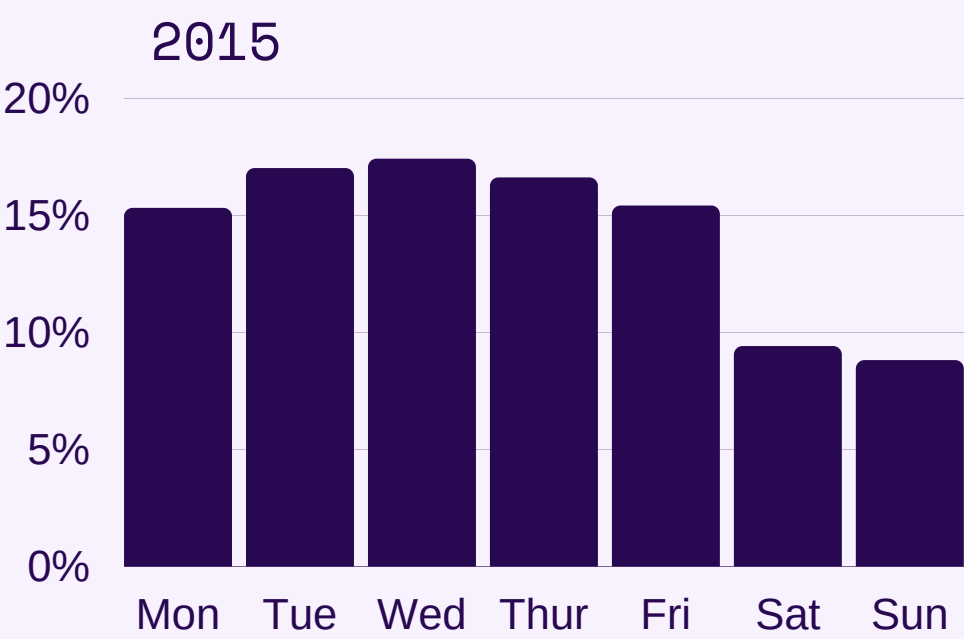
AVERAGE DURATION OF FEMALE TRIPS

Divvy bike trip duration in minutes
from 2015 - 2018

TRIP DAY DISTRIBUTION
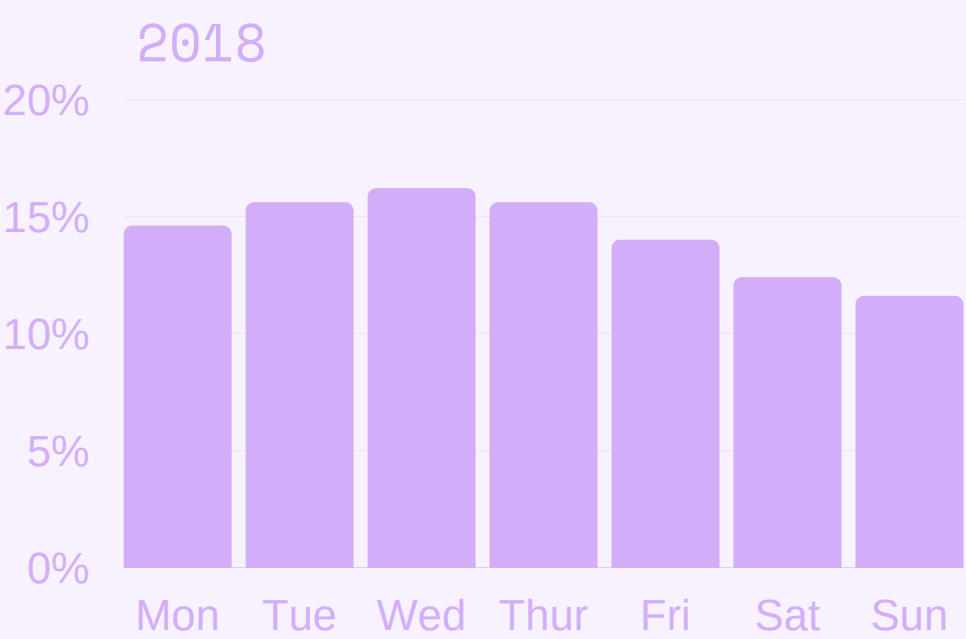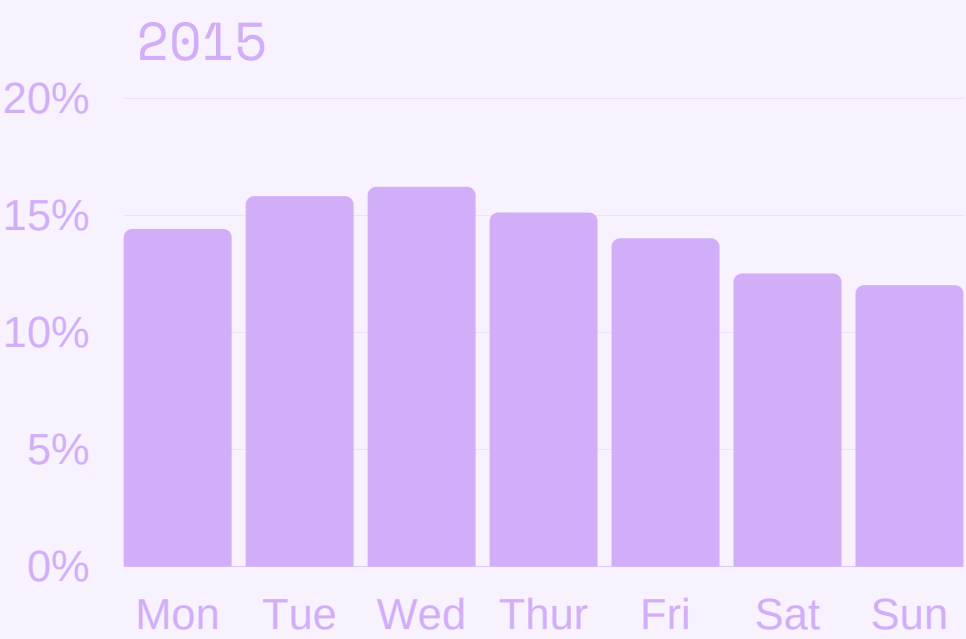
GENDERED EXPERIENCES IN THE CITY

SHARE OF MALE TRIPS BY DAY

Divvy bike day of trip in 2015 and 2018

2015

2018

SHARE OF FEMALE TRIPS BY DAY

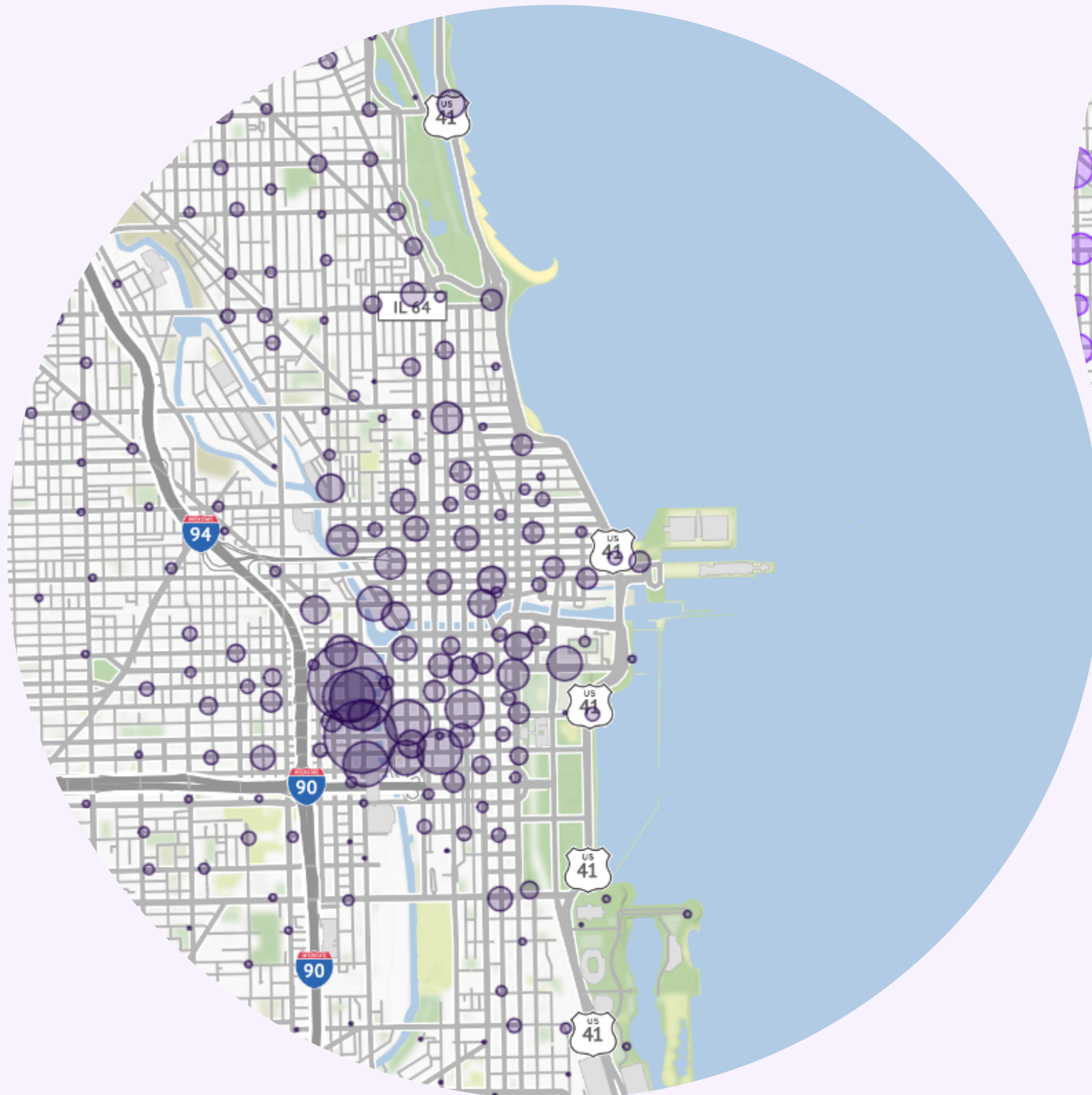Divvy bike day of trip in 2015 and 2018
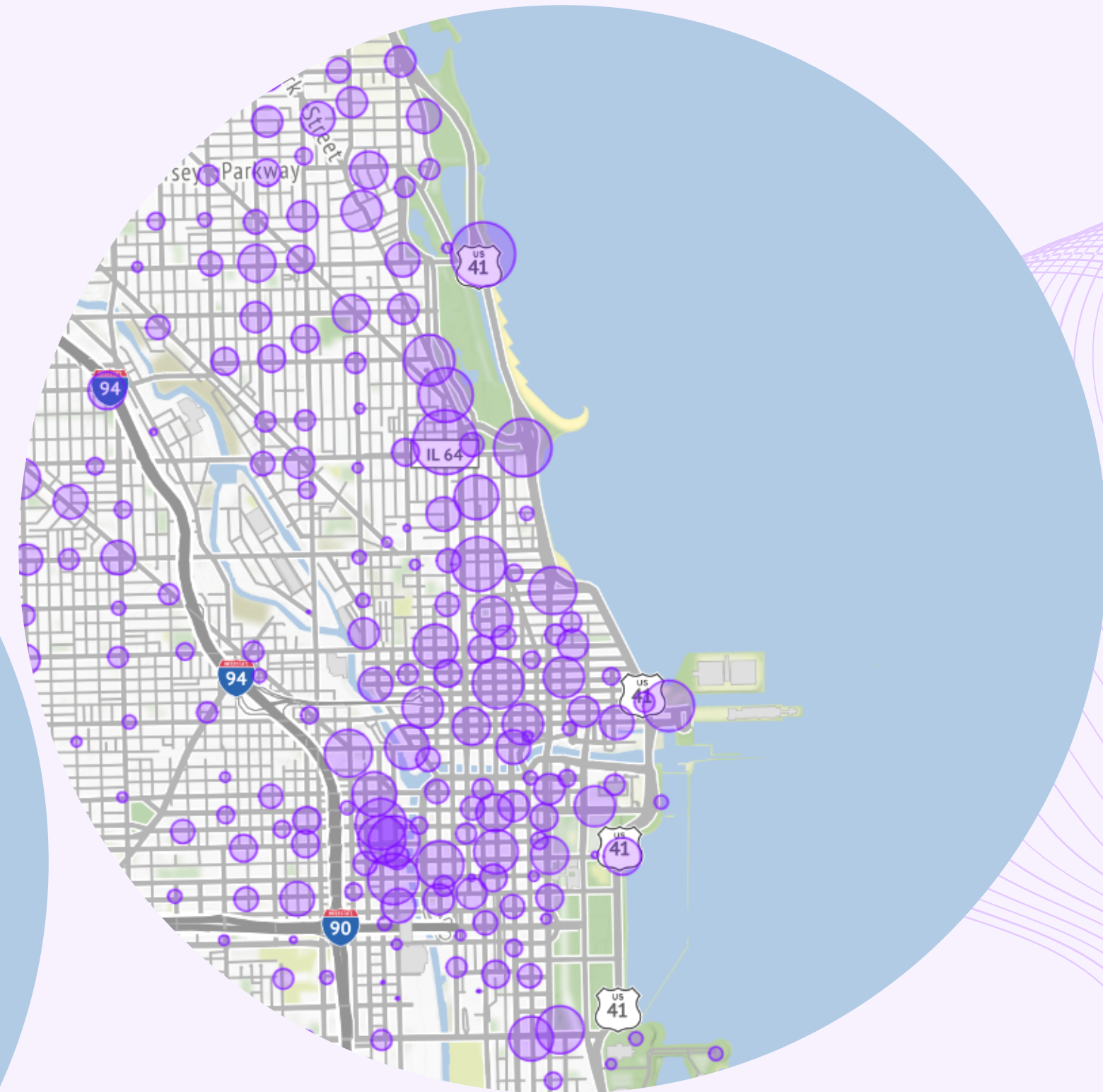
2015

2018

TRIP START DISTRIBUTION

2015 Male Trip Starts

- Male trips are focused in the West Loop

- Female trips are dispersed throughout the Loop and surrounding residential neighborhoods

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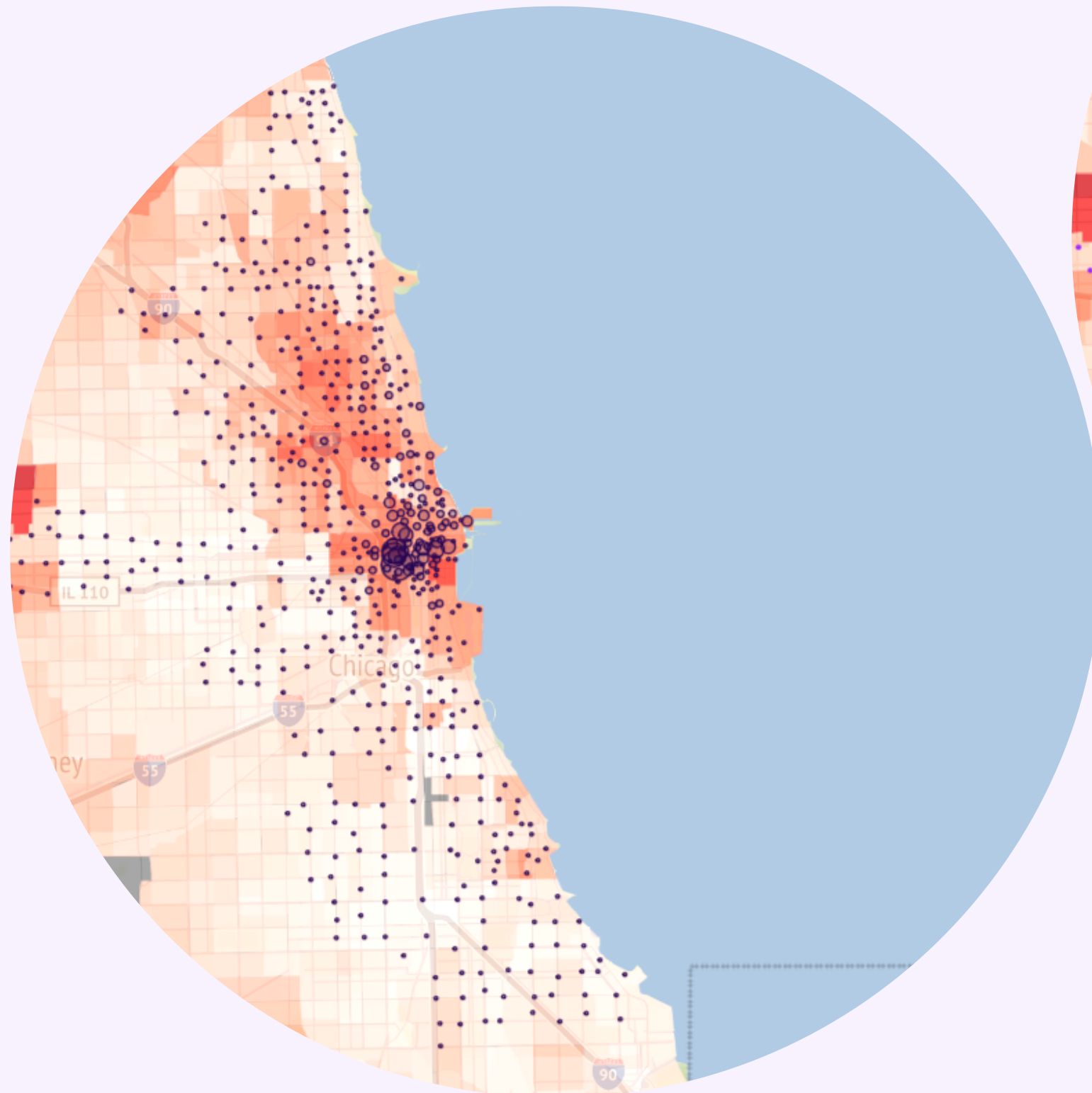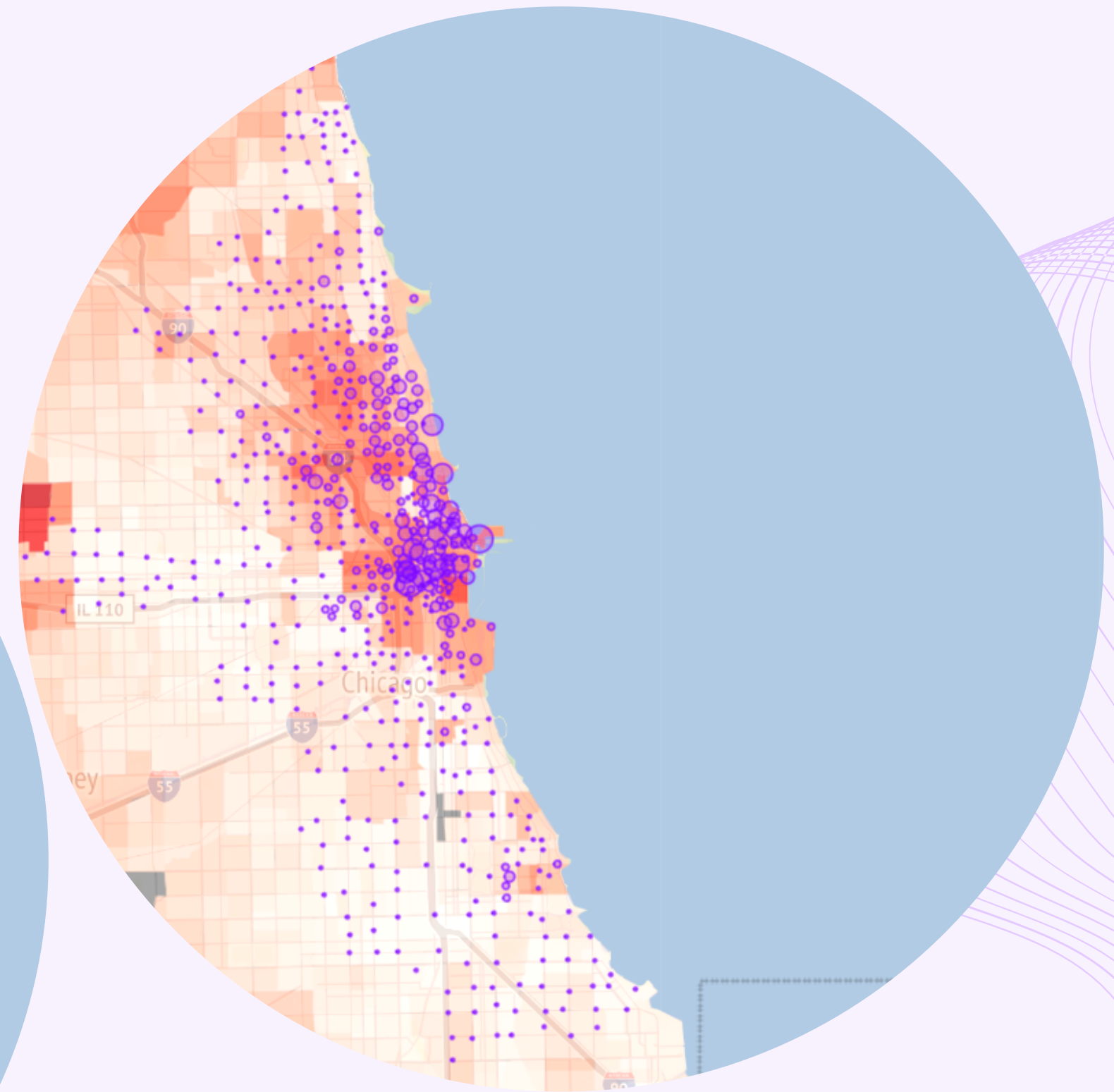
2018 Male Trip Starts

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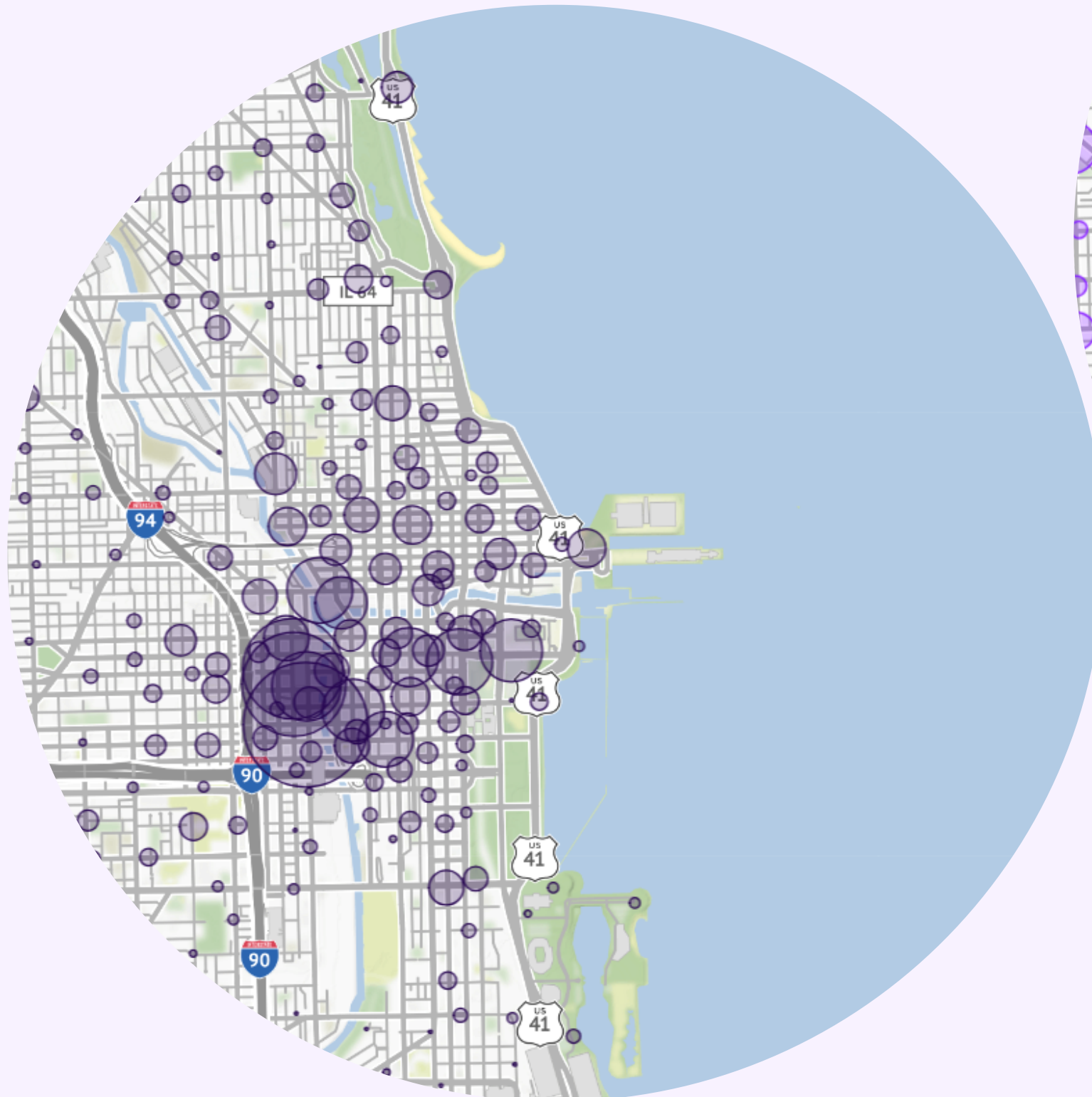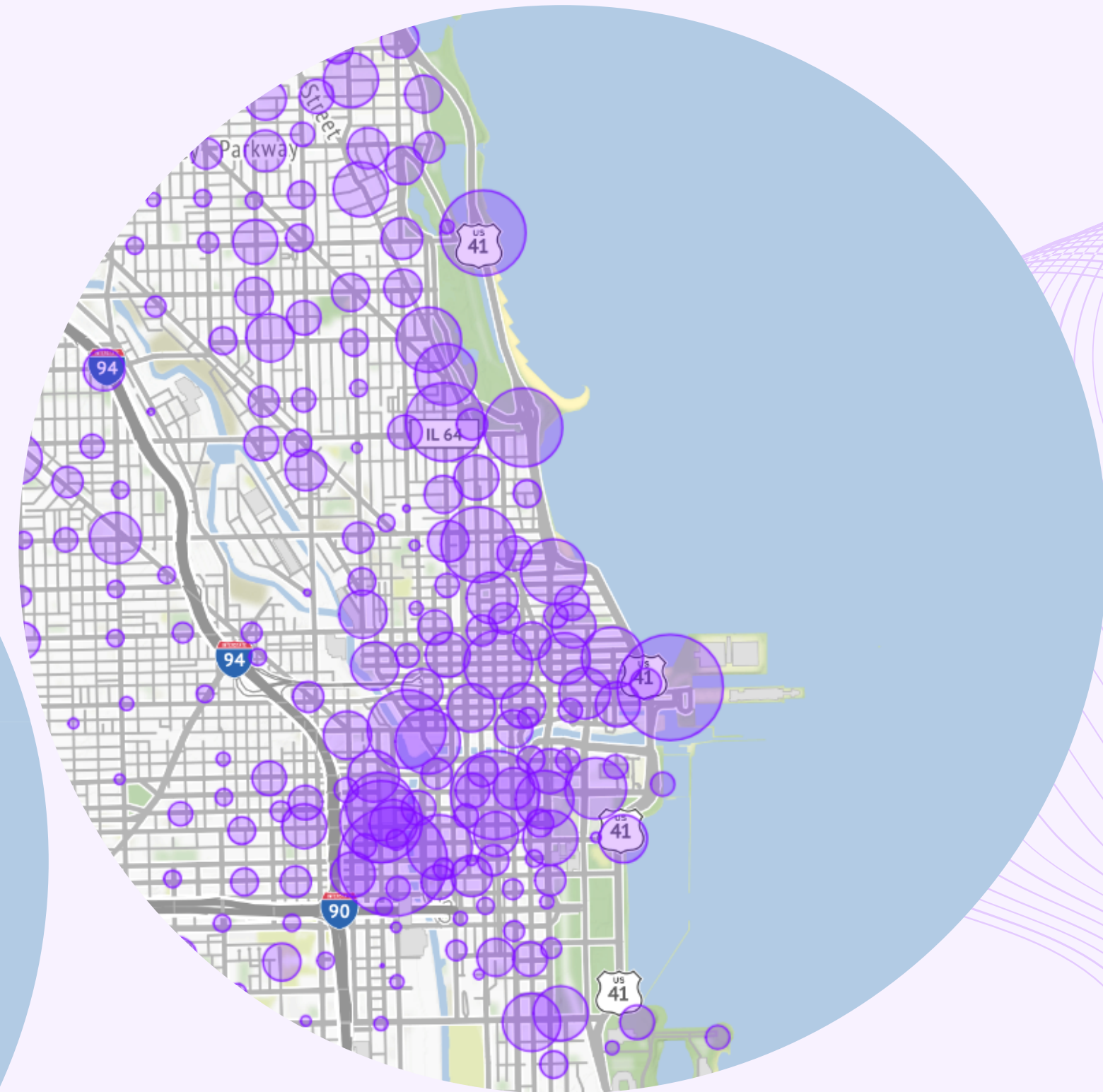
TRIP START AND INCOME DISTRIBUTION

2018 Male Trip Starts

- Male trips loosely follow the income map

- Female trips show a strong relationship between income and divvy trips
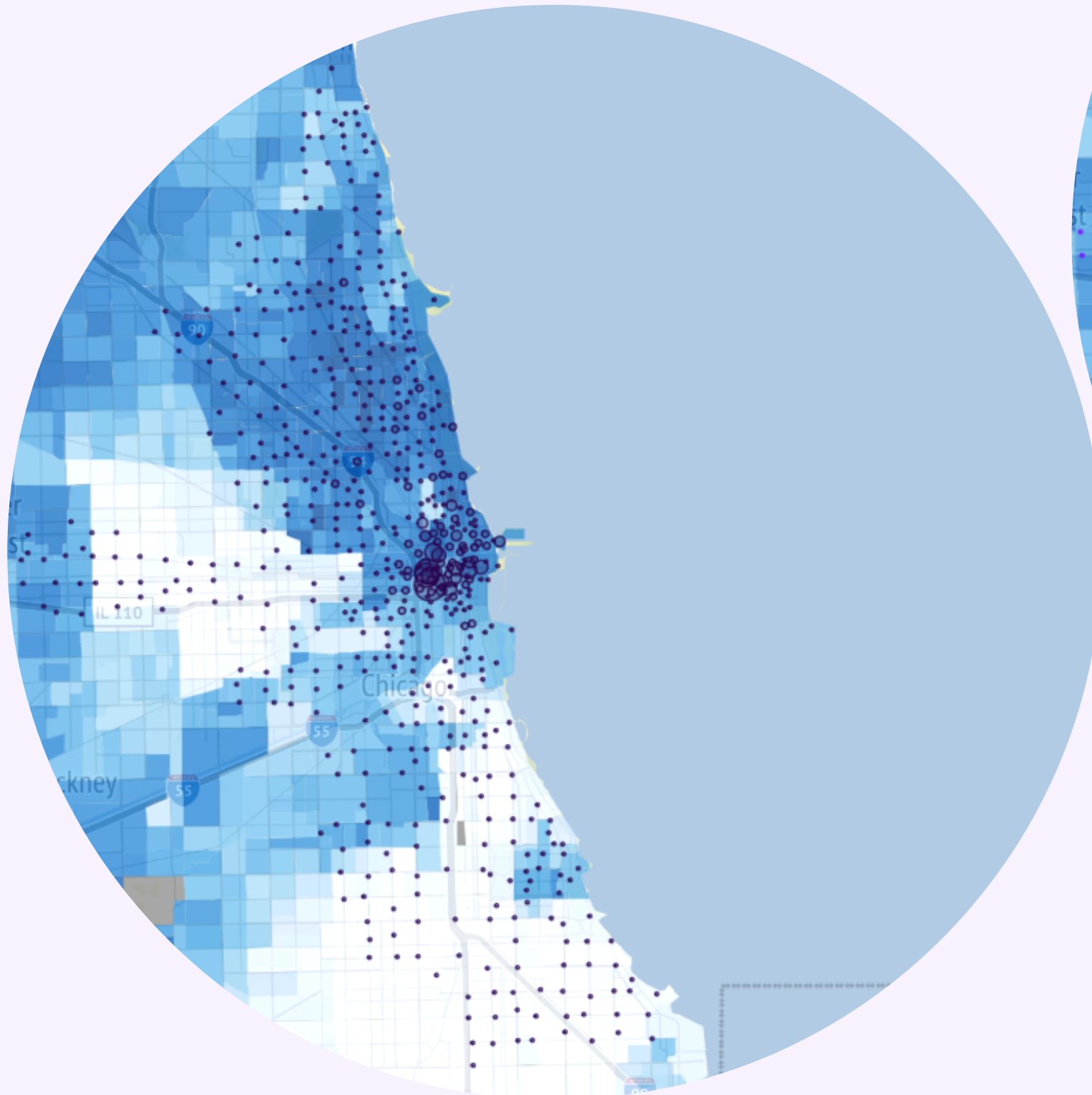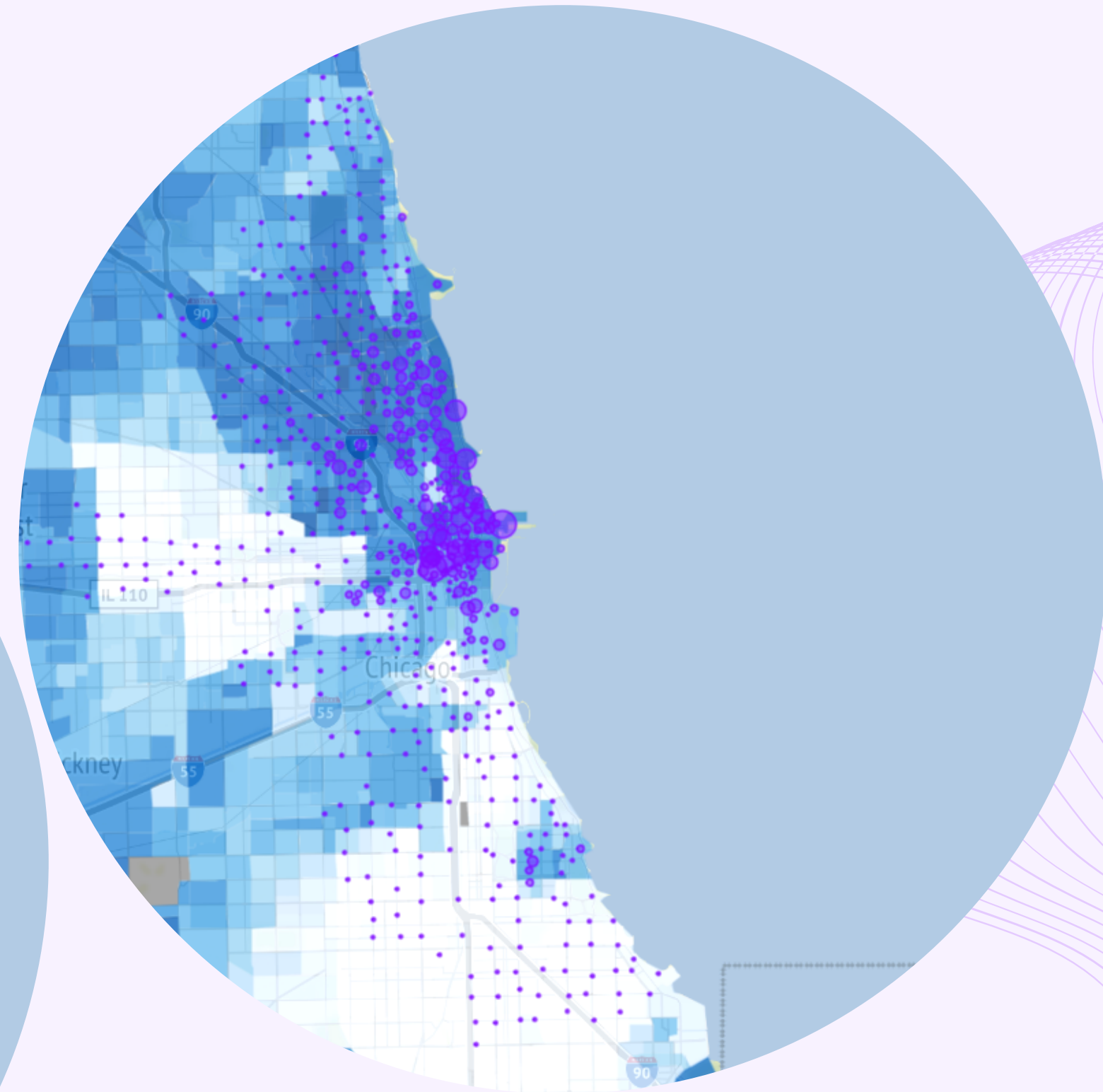

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TRIP START AND RACE DISTRIBUTION

2018 Male Trip Starts

- Both male and female trips fit the income map better

TWITTER SENTIMENT ANALYSIS

STEP 1: BUILD THE MODEL

Use a hand-gendered dataset of tweets to build and train a logistic regression model to predict gender based on the content of a tweet.

STEP 2: GENDER THE TWITTER DATA

Use the logistic regression model to gender tweets from twitter's API using the key words: cta, chicago, public transit, train, bus, etc.

STEP 3: RUN THE SENTIMENT ANALYSIS

Run a sentiment analysis and compare the results from male and female tweeters. Summarise the results of the sentiment analysis on female experiences in the city.

Where do we go from here?

ESTABLISH GENDERED DATA COLLECTION

Establish methods of collecting gender information from users in order to evaluate gender vulnerability

CREATE VULNERABILITY TOOLKITS

Create toolkits for measuring gender and other vulnerabilities and how to address those vulnerabilities

ENACT PUBLIC SAFETY POLICIES

Enact policies that ensure public safety of all vulnerable populations