



MTA DATA ANALYSIS

WOMEN TECH WOMEN YES
(WTWY)

STREET TEAM PLACEMENT
OPTIMIZATION

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INTRODUCTION

- **Motivation:** Help WTWY increase awareness and reach for its summer gala event, a significant portion of its fundraising
- **Objectives:** Determine the best subway station that optimizes WTWY's street team placement
- **Goals:** Identify the best subway station, date and time to place street teams

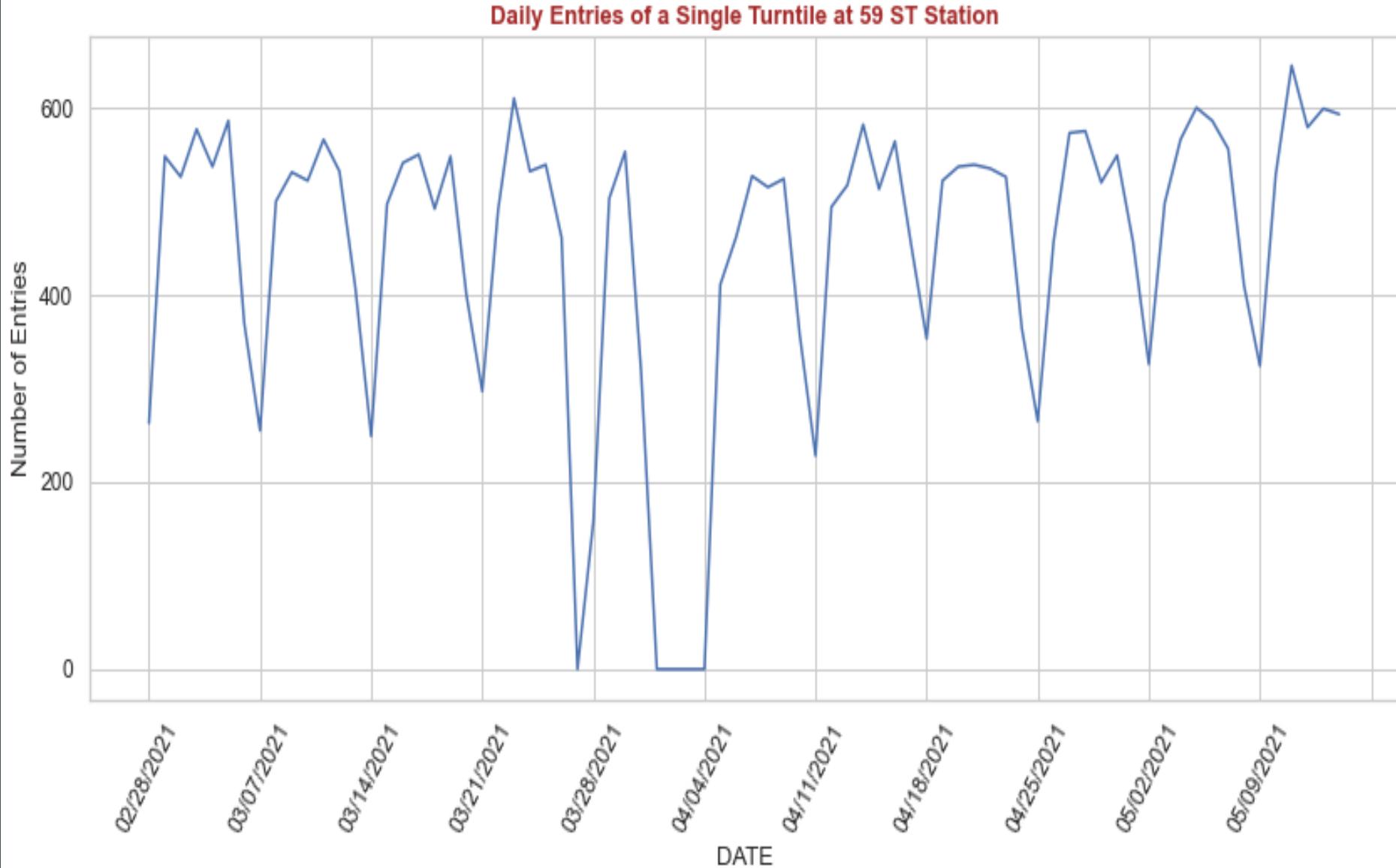
METHODOLOGY

- **Data:** New York City MTA turnstile data
 - Entries & Exits
- **Date:** Most recent 3 months period
 - February 28, 2021 to May 14, 2021
- **Models:** Data Manipulation & Exploratory Data Analysis



ANALYZING A SINGLE TURNSTILE

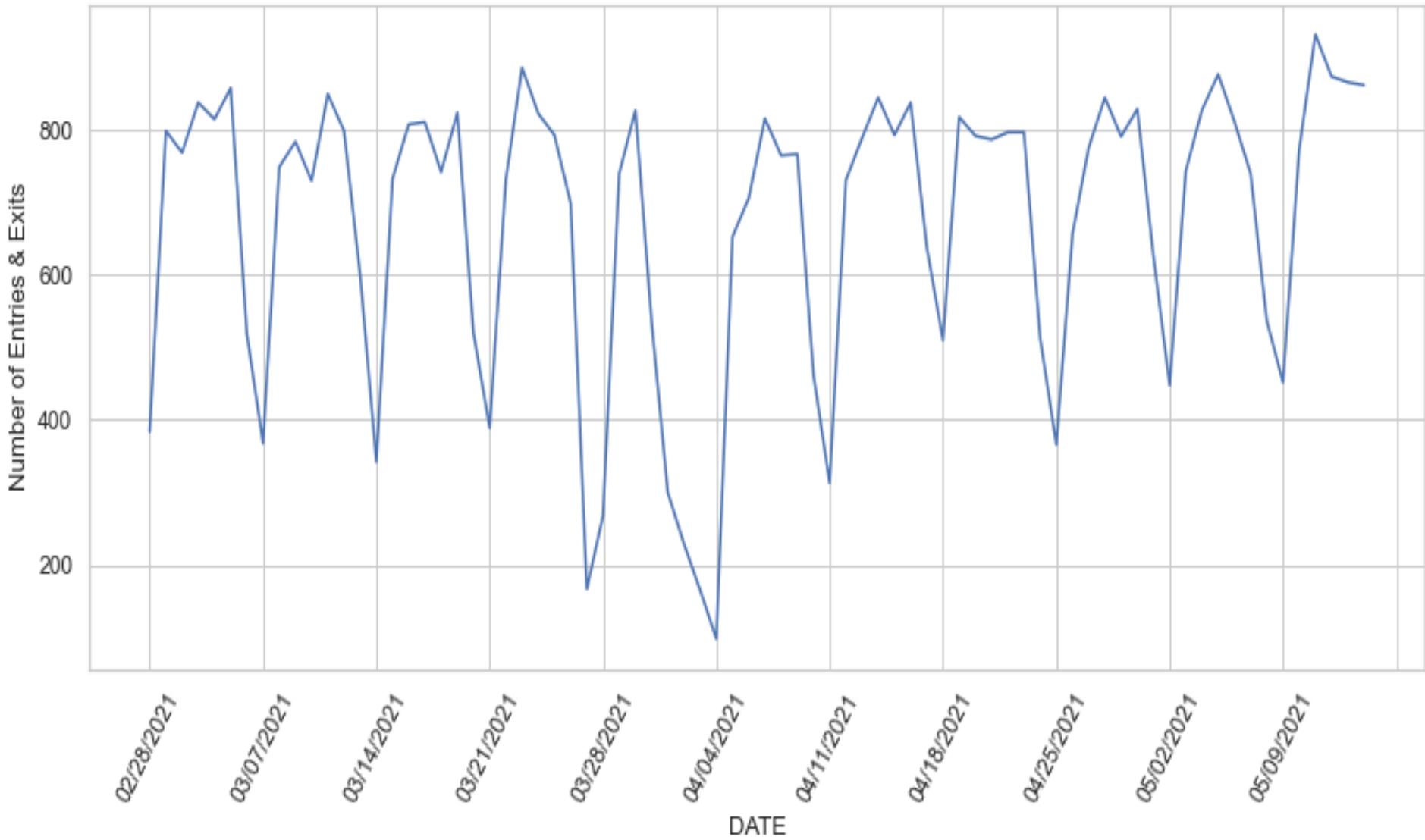
- CHOSE A RANDOM STATION
 - 59 ST
- ENTRIES ONLY



SINGLE TURNSTILE, BUT WITH ENTRIES AND EXITS

- 59 ST
- ENTRIES + EXITS

Daily Activity of a Single Turnstile at 59 ST Station



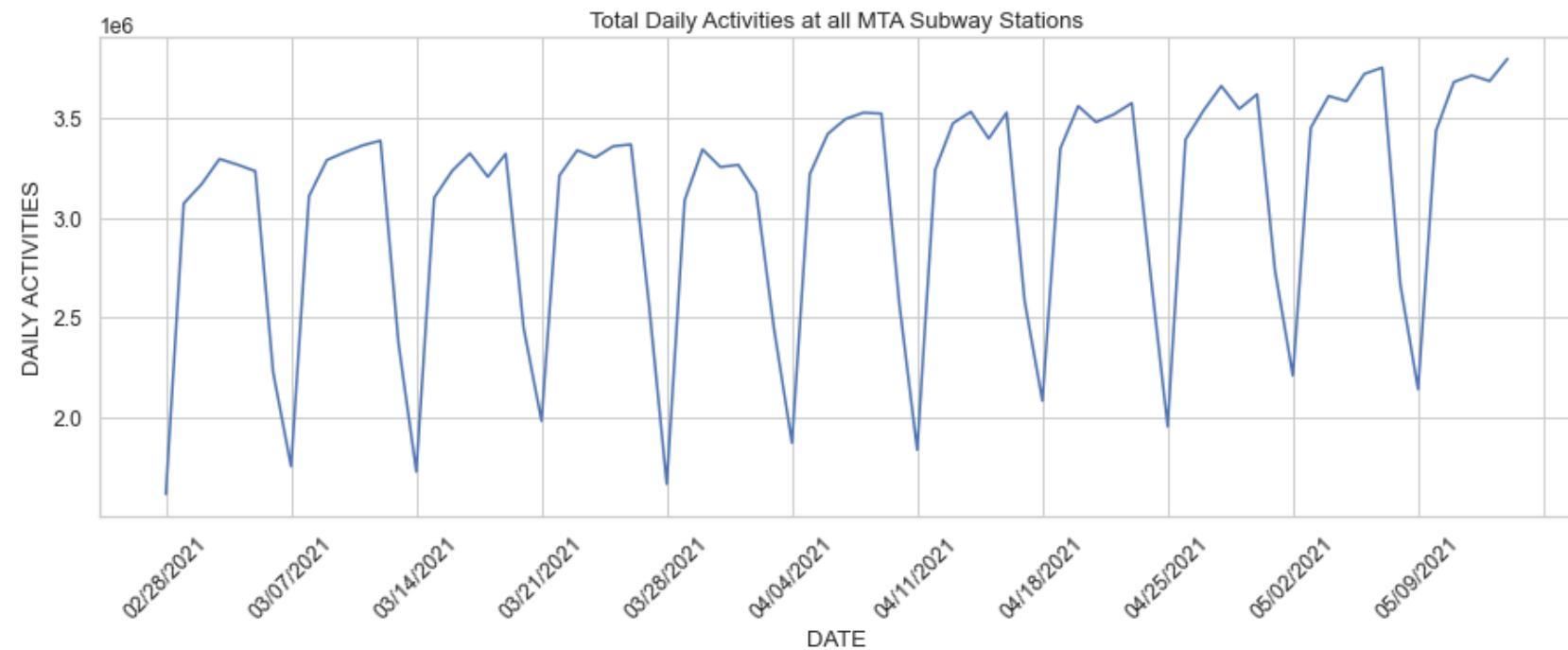
WHY TAKE ENTRIES & EXITS BOTH?

- SOME DATA SHOWS ZERO ENTRIES
- BUT ON THE SAME DAY EXITS ARE NOT ZERO. WHY?
- CAGELIKE TURNSTILES
- **TAKE ENTRIES & EXITS BOTH = DAILY ACTIVITIES!**



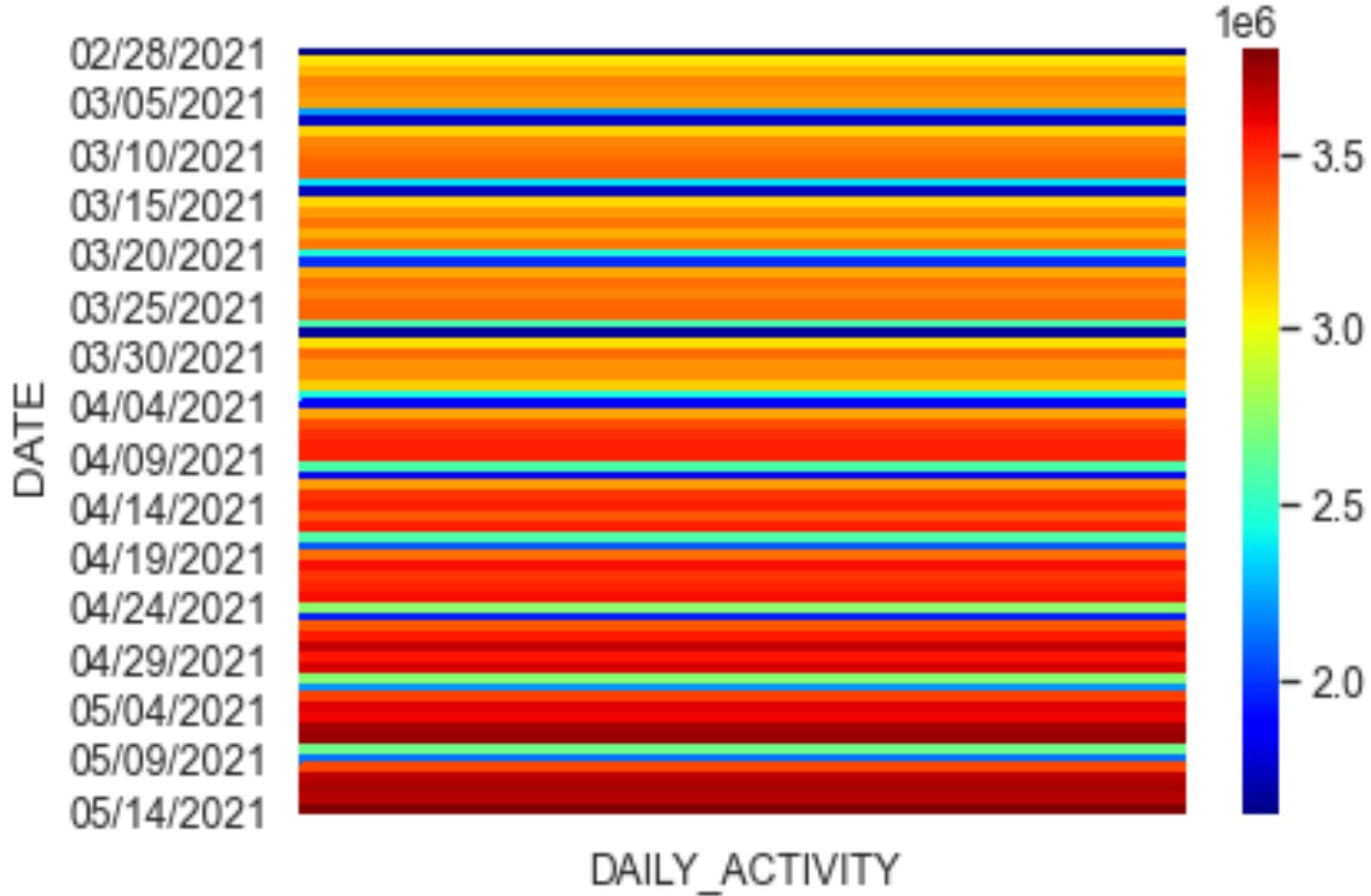
ANALYZING ALL SUBWAY STATIONS

- LINE CHART
- DAILY ACTIVITY
- Ridership is gradually rising after vaccinations and recovery from COVID19



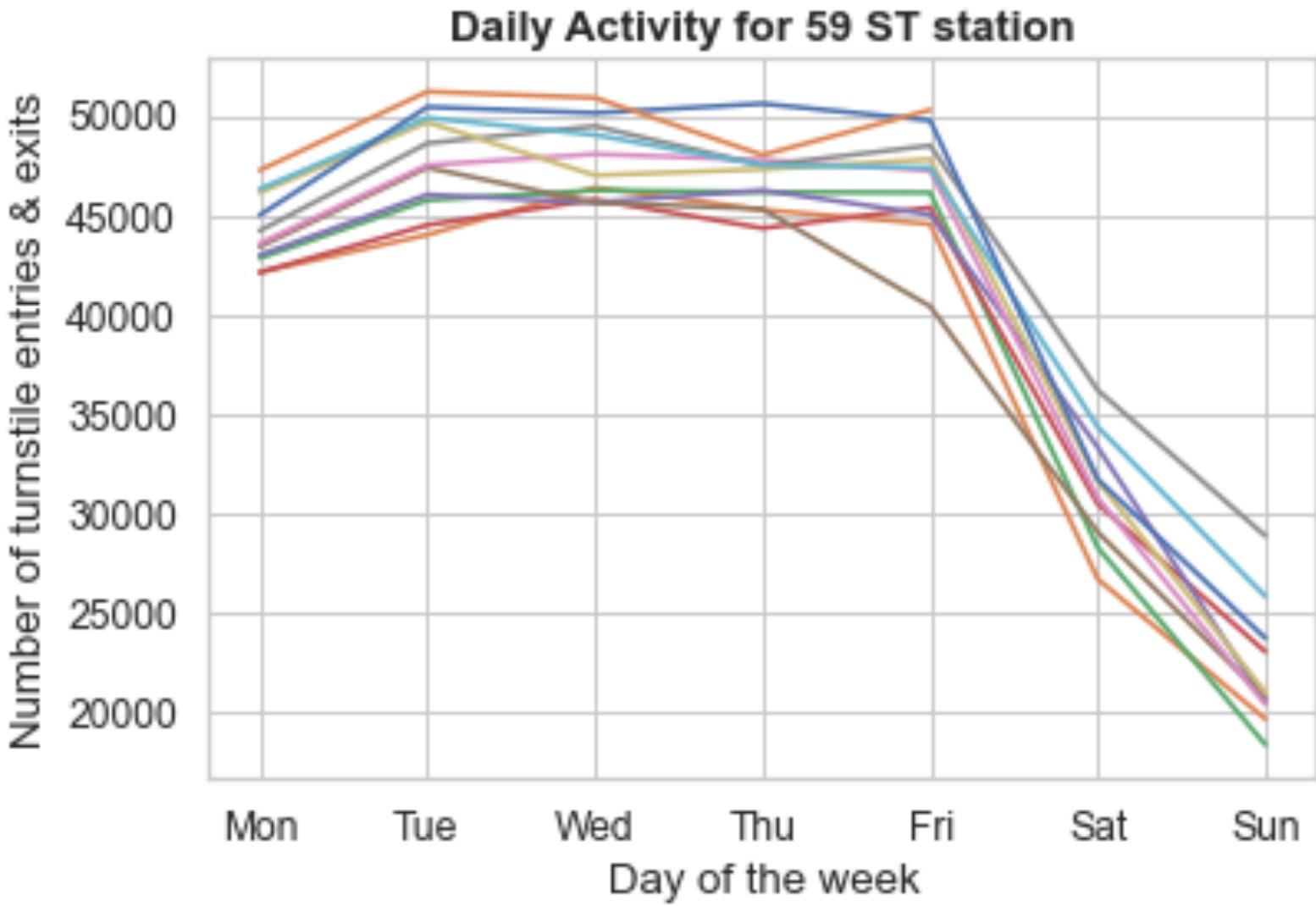
ANALYZING ALL SUBWAY STATIONS

- HEATMAP
- DAILY ACTIVITY
- Red area getting bigger
- Ridership is gradually rising after vaccinations and recovery from COVID19



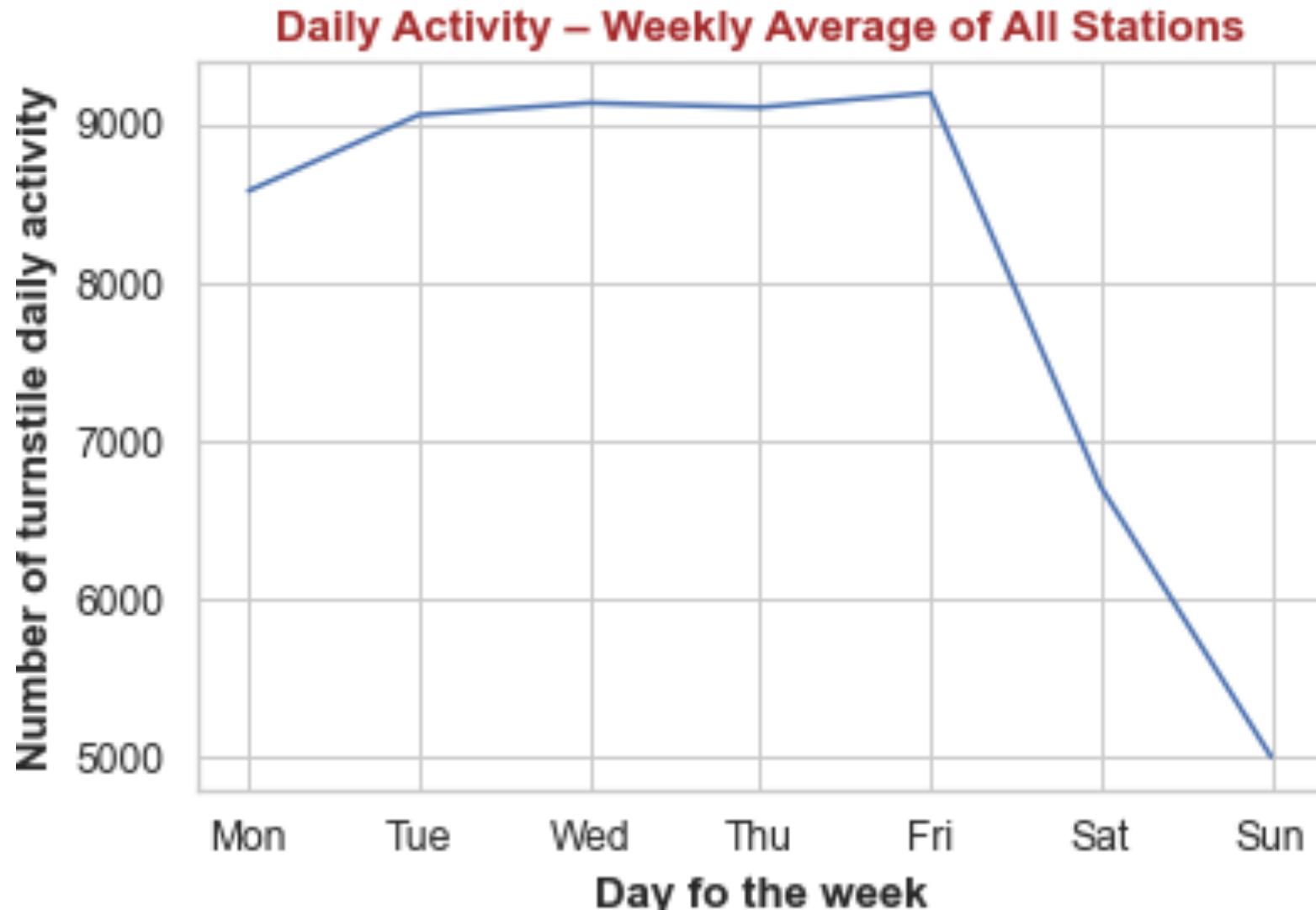
WHICH DAY OF THE WEEK IS BUSIEST?

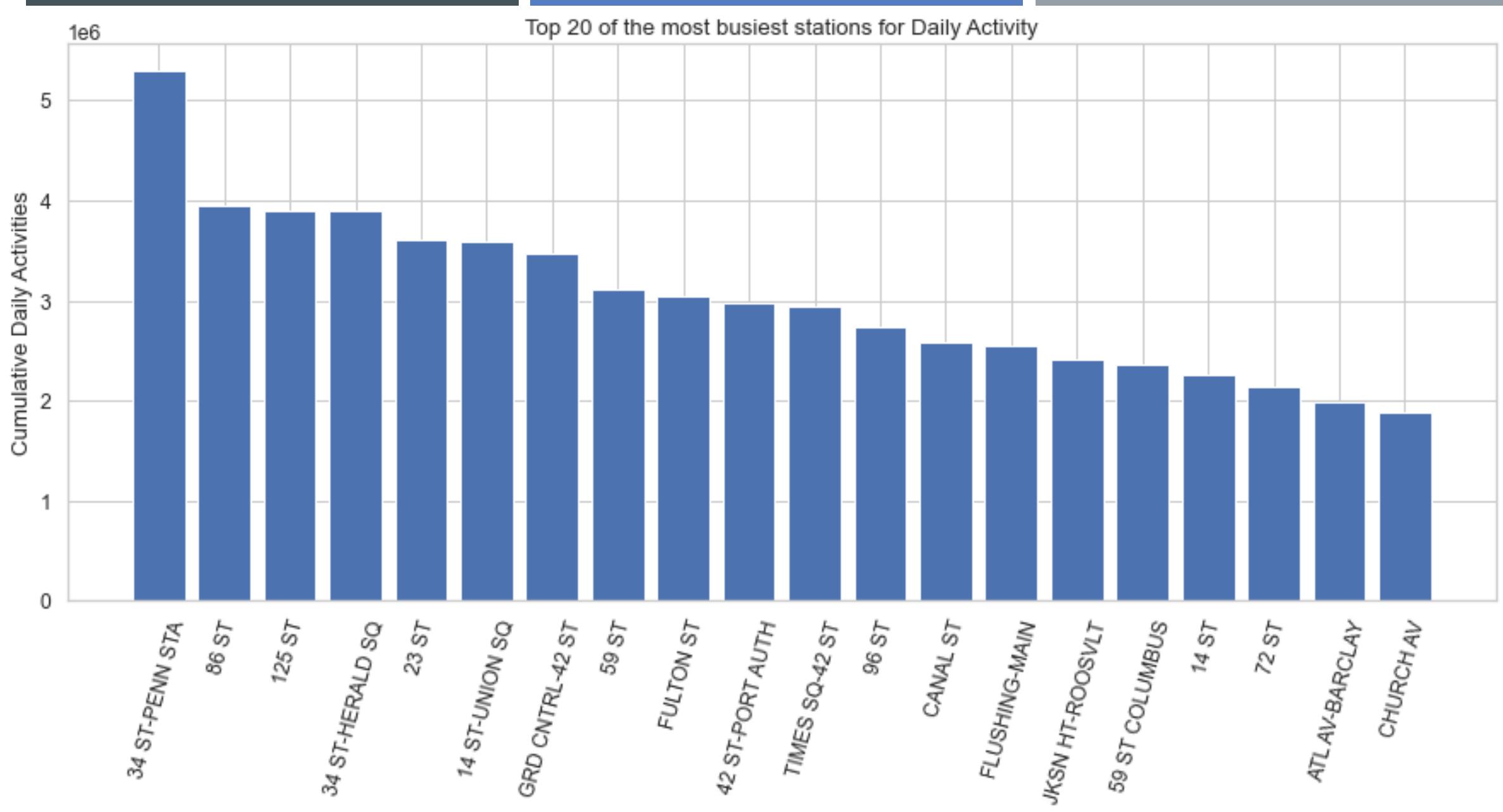
- A single turnstile at 59 ST
- Each line for a week data
- 11 weeks
- Weekdays > Weekends
- Commute for work



WEEKEND VS. WEEKDAYS – ALL STATIONS

- Across all stations, daily activity is much higher during the weekdays
- Peaks on Fridays!





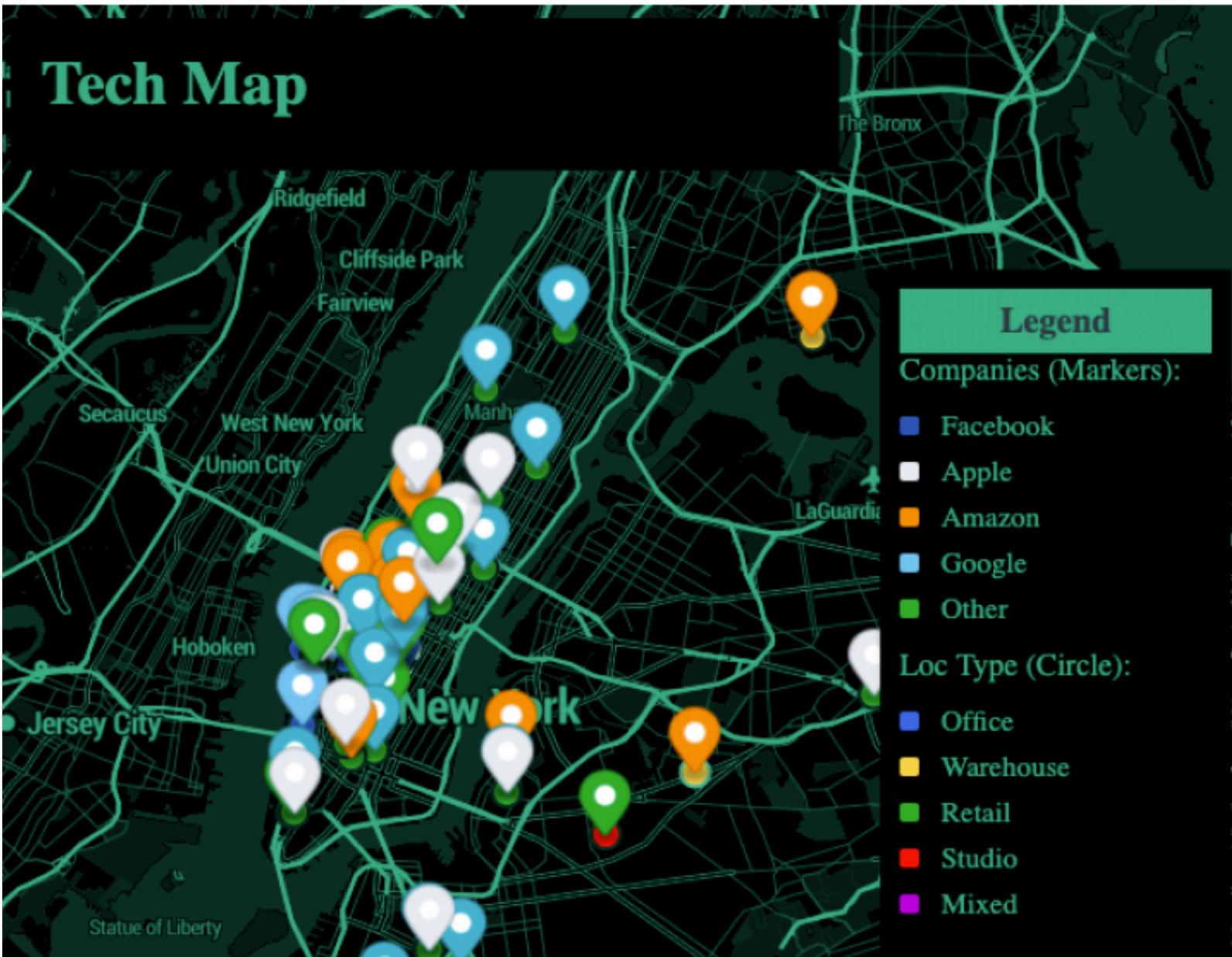
ALL STATIONS
INFO TELL US...



TOP STATIONS
LIST

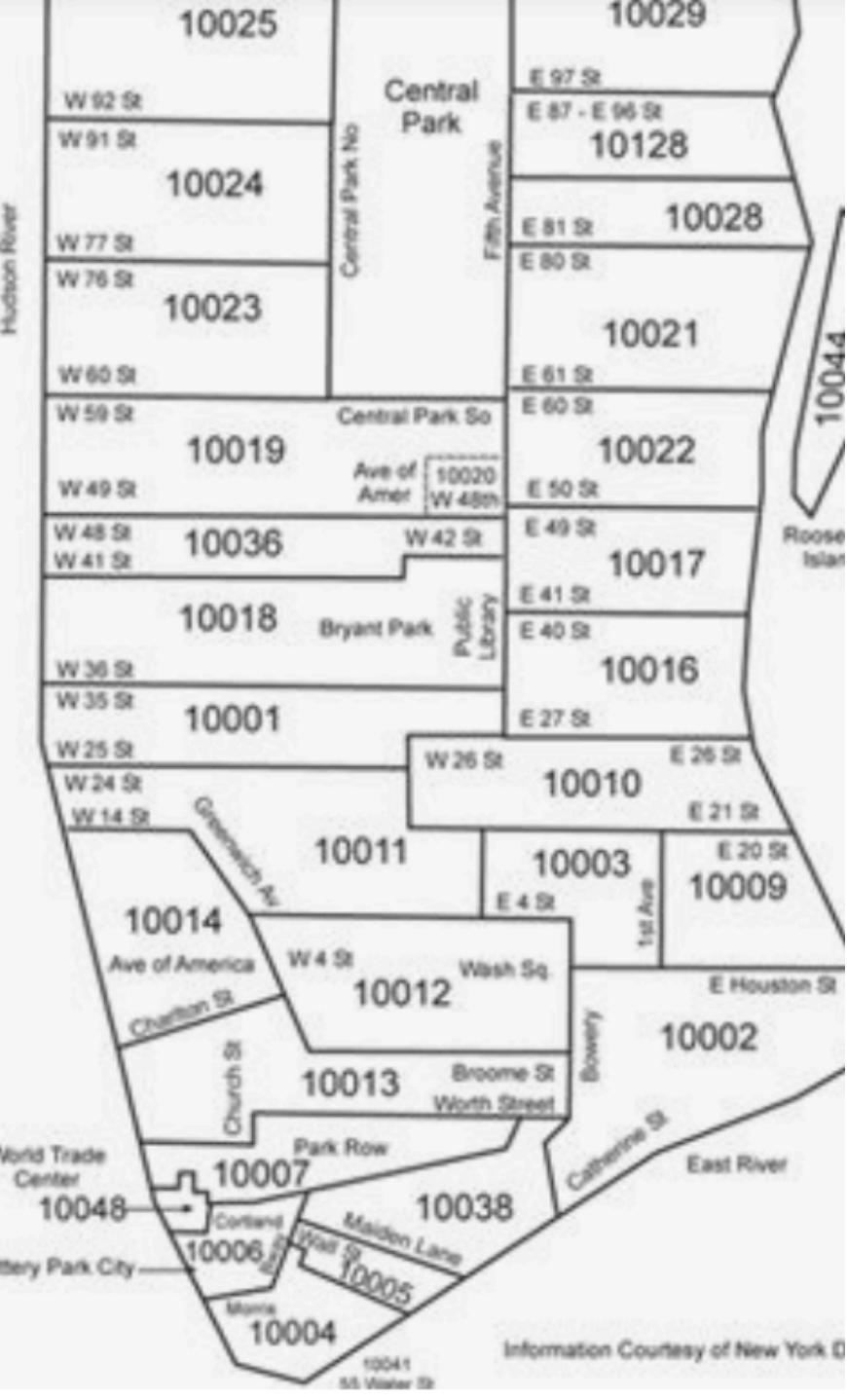


PEAK:
FRIDAY!



BIG TECH MAP IN NYC

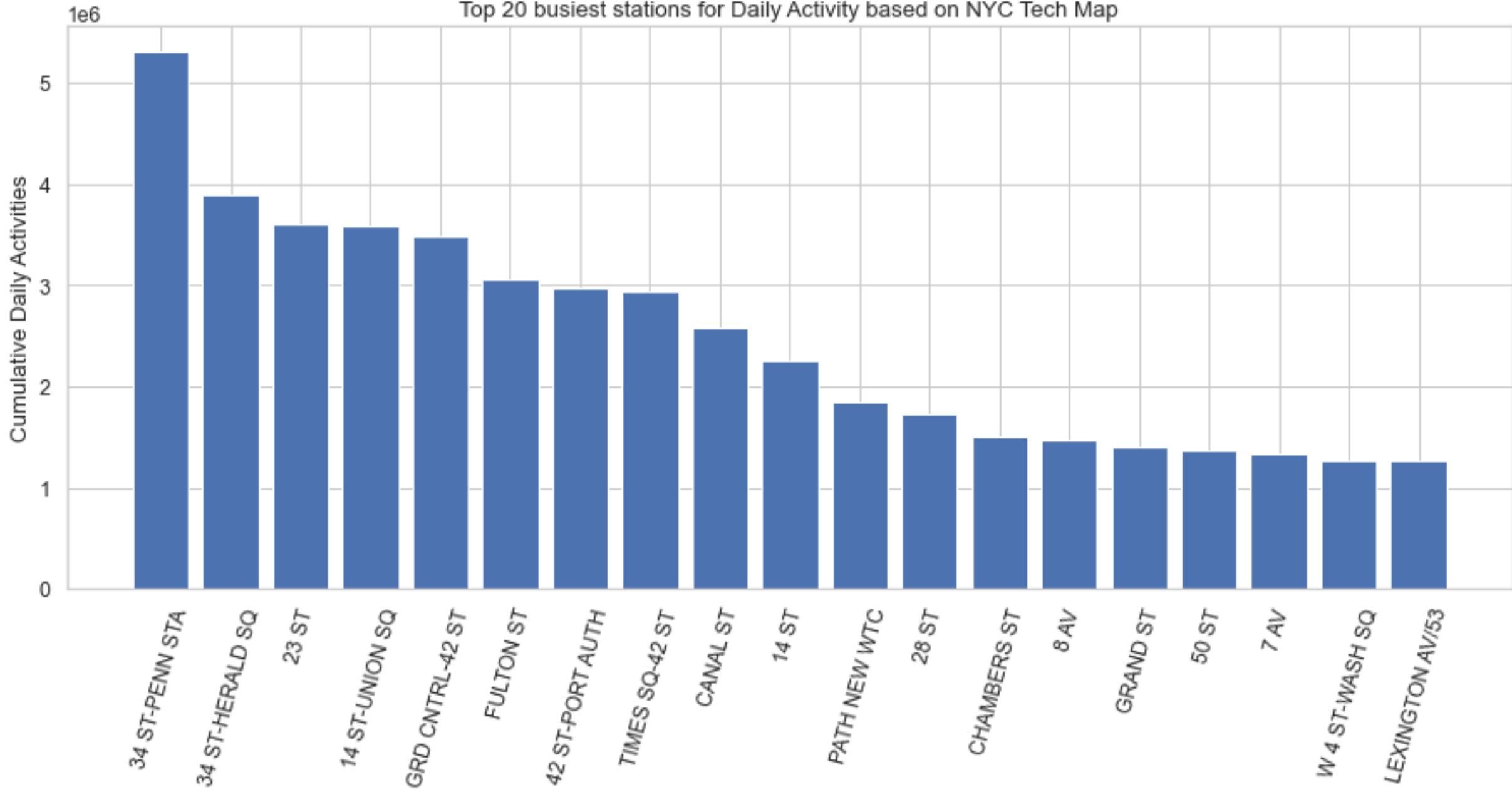
August 2019



LOWER MANHATTAN ZIPCODES

- MOST OF THE MAJOR TECH FIRMS ARE LOCATED **BELOW CENTRAL PARK**
- MAYBE ITS WARMER IN THE SOUTH? – WILL NEED TO RUN REGRESSION ON THIS ☺

Top 20 busiest stations for Daily Activity based on NYC Tech Map





BEST STATIONS

#1 : 34 ST PENN STATION

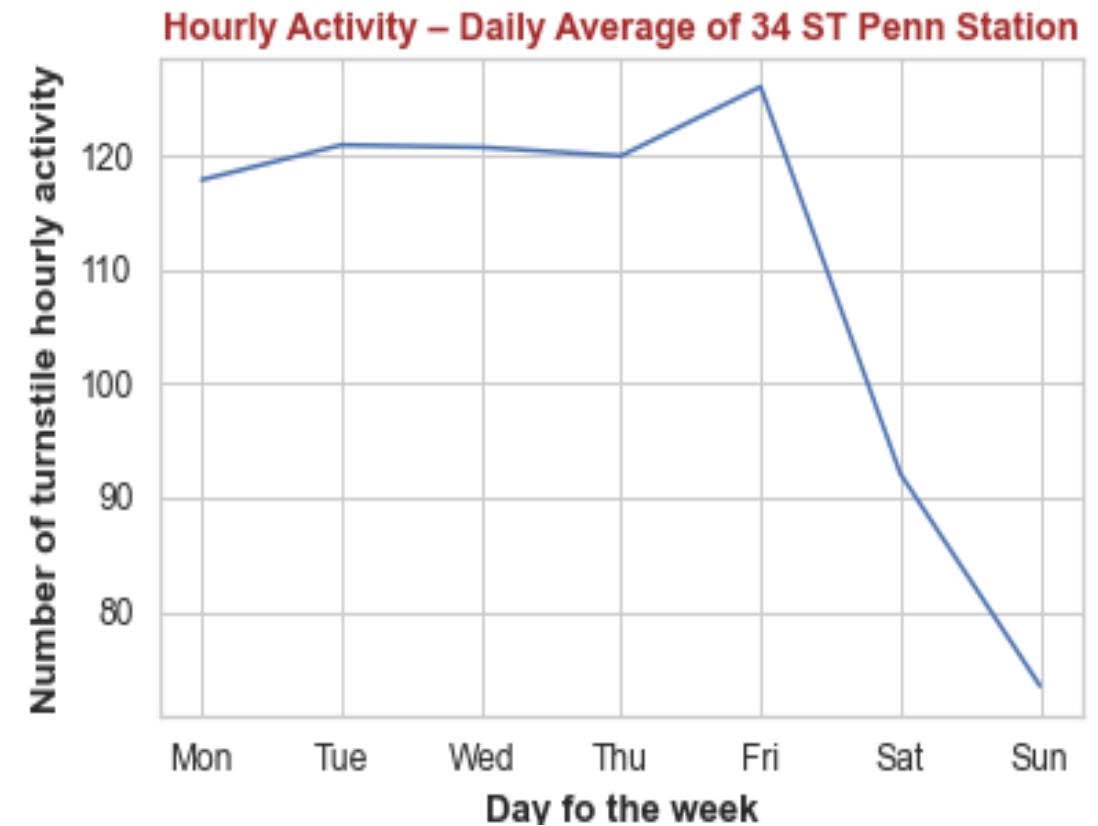
#2: 34 HEARLD SQ

#3: 23 ST



TOP 1: 34TH PENN STATION BEST DAY ?

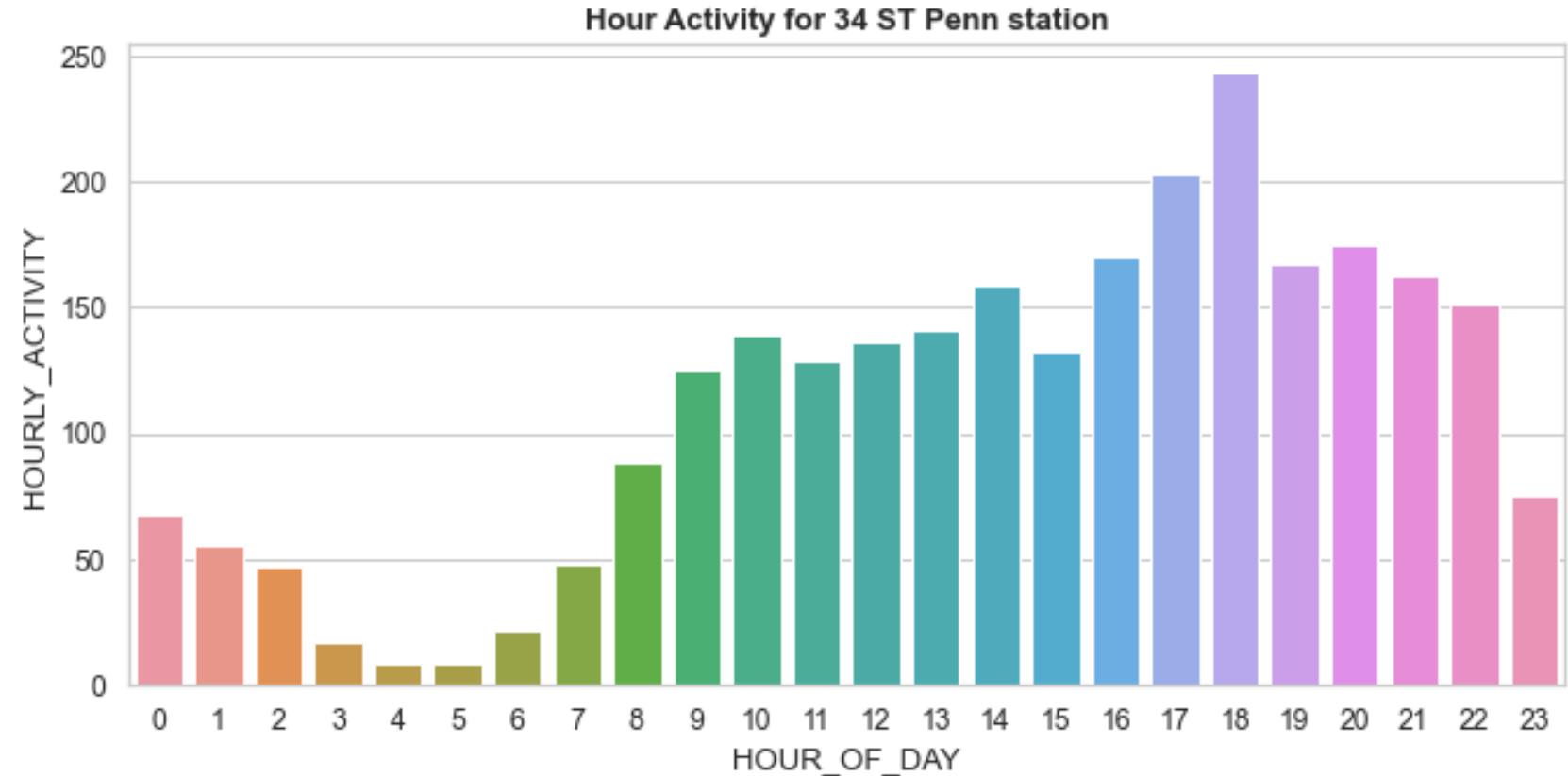
- **FRIDAY IS THE BUSIEST!**



BEST HOUR?

■ 6PM

IS THE BUSIEST!



CONCLUSIONS



1

34th Street Penn Station

2

Fridays (TGIF)

3

6pm (Workday's Over!)

FUTURE WORK

PRE-COVID VS.
POST-COVID
ANALYSIS

APPENDIX

- **Data Resource:**
<http://web.mta.info/developers/turnstile.html>
- **Tech Map Reference:** The Real Deal real estate news media