



**Game
Attendance:
NY Liberty**



OVERVIEW

- Business Understanding
- Exploring the Data
- Methods and Modeling
- Results
- Recommendations
- Next Steps

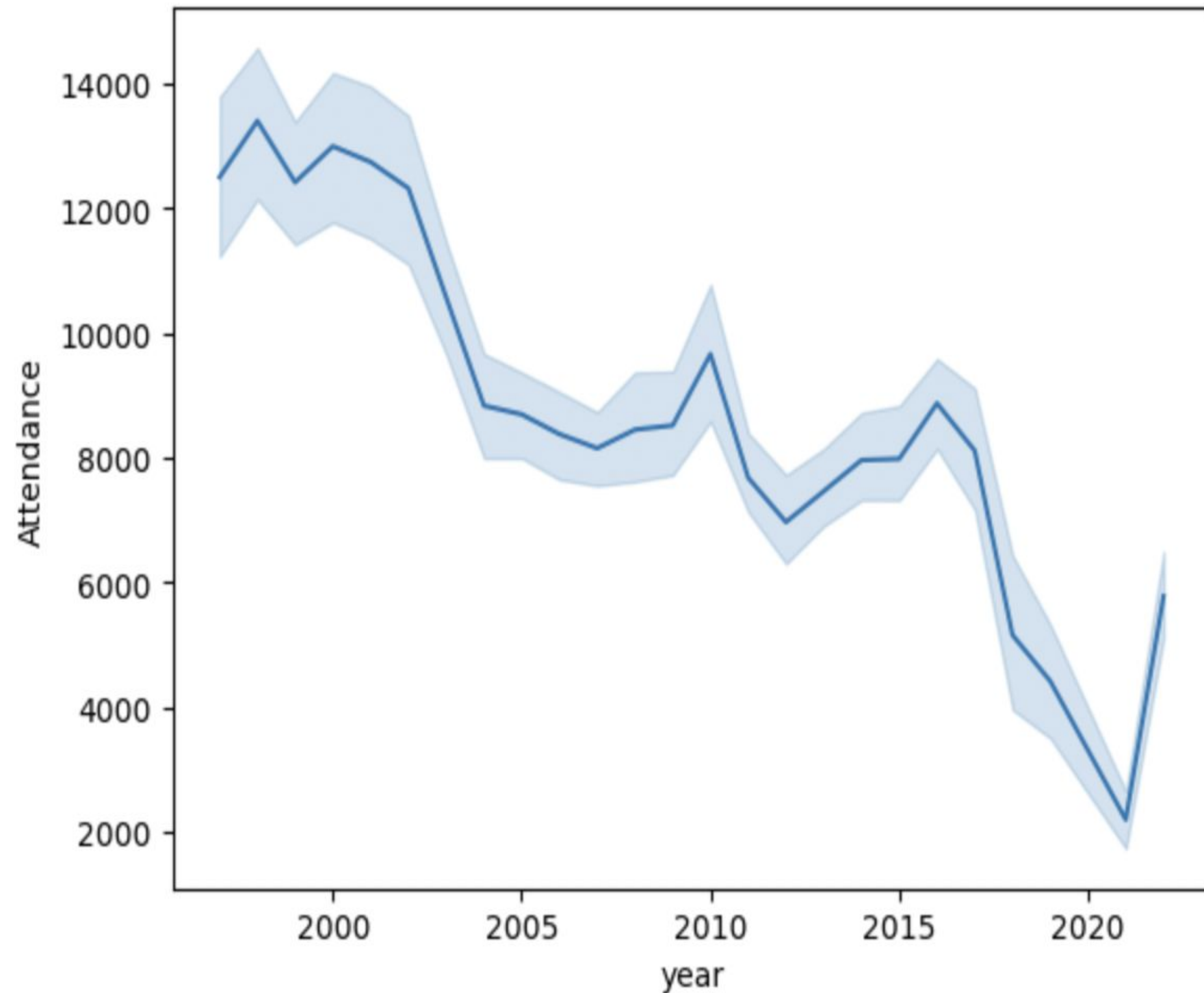




BUSINESS PROBLEM

- WNBA game viewership on the rise
- 2022-2023 was highest viewed season
 - average of 379 thousand viewers
- How will this affect game attendance?
 - As well as cross-functional Divisions
 - ie: Marketing, Ticketing, Concessions, etc
- Use Time Series to forecast game-by-game attendance for the 2023-2024 season

THE DATA



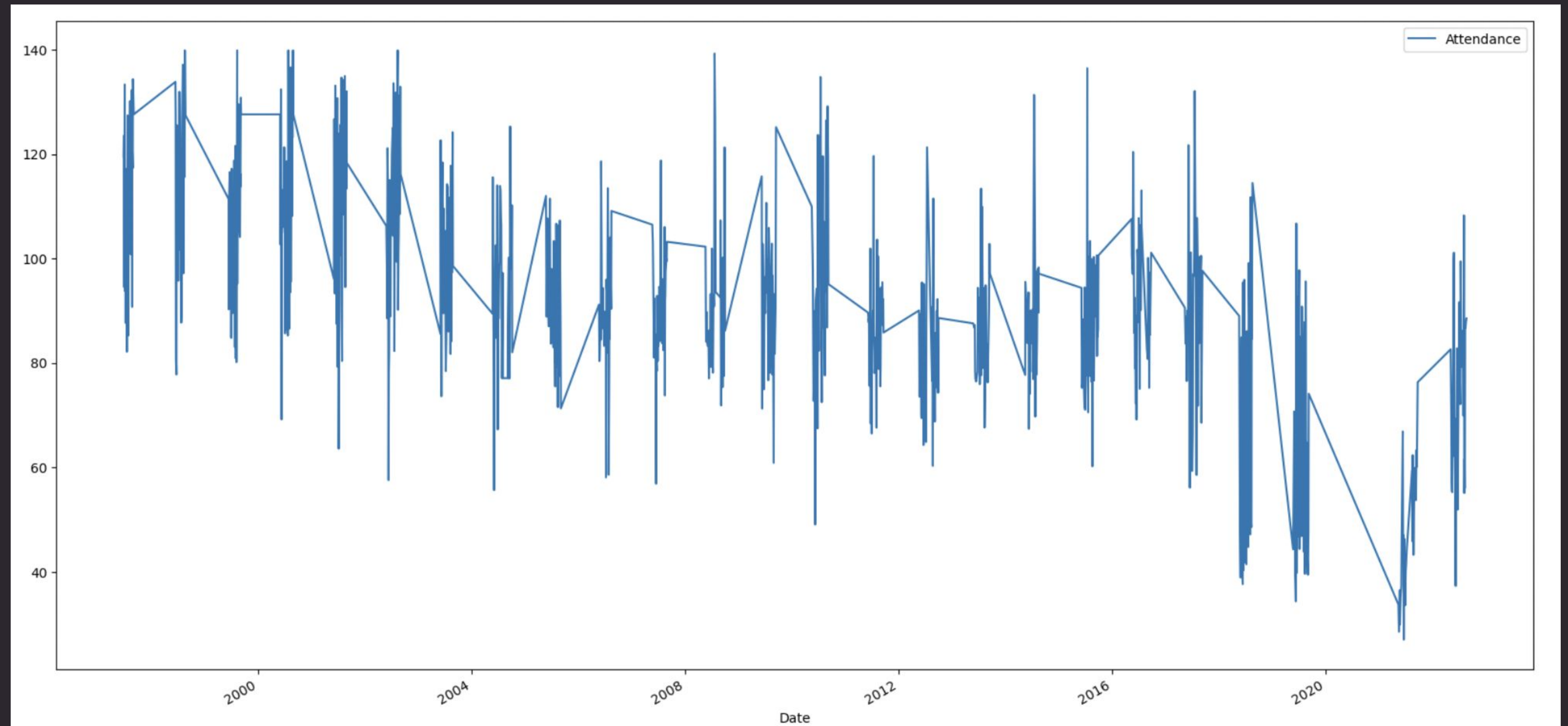
- Scrubbed data from acrossthetimeline.com
- Game-by-game attendance from 1997-present for each team
 - Includes:
 - Date
 - Game Attendance
 - Opponent
 - Location
 - Segment of Season
- Filtered out data for New York Liberty, created new CSV



DATA PREP



- Plot of initial data
- P-Value = 0.21
- Not stationary

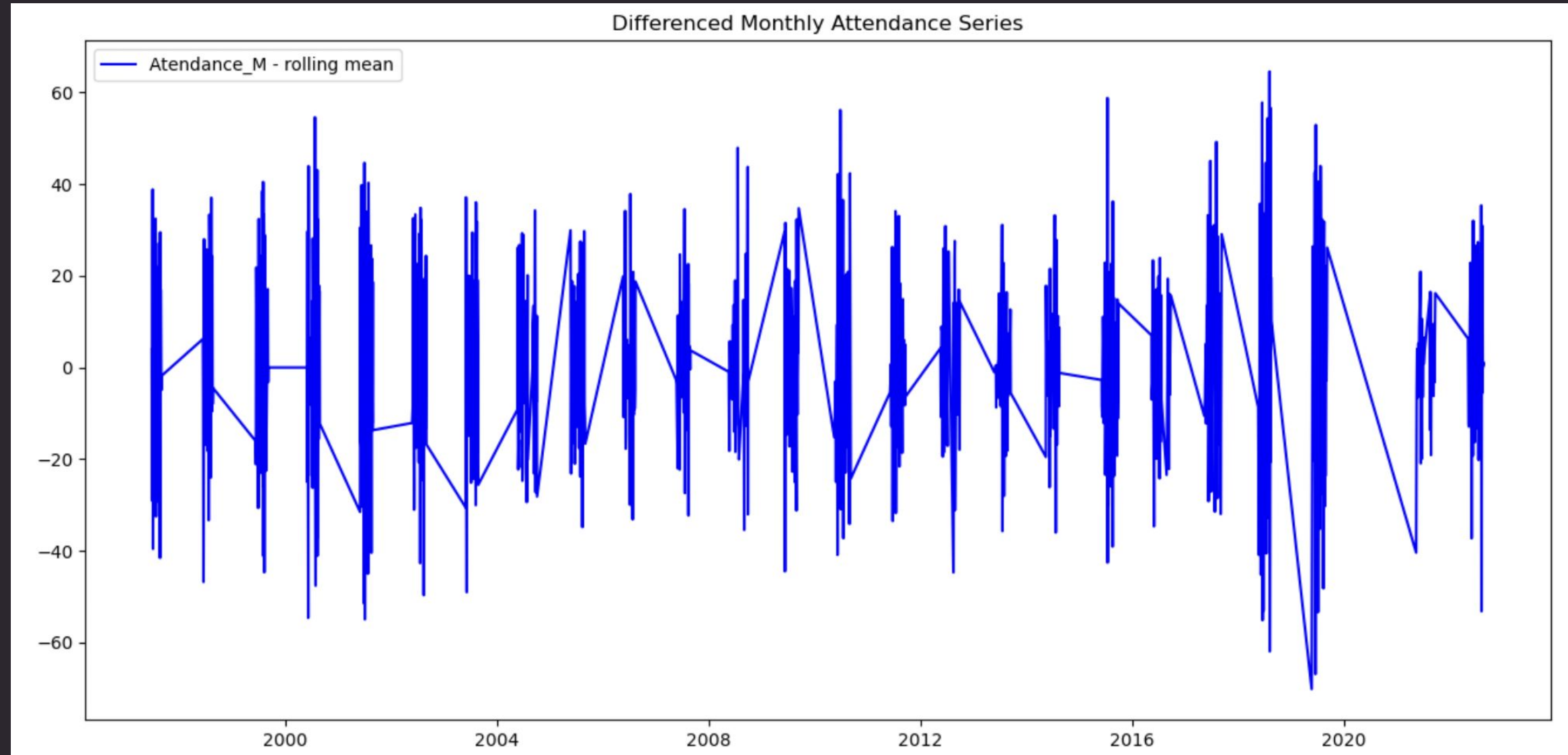




DATA PREP



- Transformed Date:
 - Log
 - Sqrt
 - Rolling Means
 - Differenced
- Best = Differenced
 - P-Value of basically 0 ($2.098931e-23$)



MODELS



32.5

NAIVE MODEL

Baseline Model

Shifted by one game



14.7

AR MODEL

Auto Regressive

Affect of past values

Lag of 17 - based on Partial
Correlation



14.6

MA MODEL

Moving Average

Error of model

Lag of 3 - based on
Autocorrelation

RECOMMENDATIONS & NEXT STEPS

● Use the differenced model to predict for future games.

● Use for:

- Ticketing
- Marketing
- Staffing
- Concessions, etc.



● Account for:

- Between season data
- 2020-21 season

● Look into how popular players new to the team could impact attendance.

THANK YOU

ASHLEY HEINKE

basketballclub@email.com

companyname@email.com

