

BROADWAY GROSSES

84 weeks pre-pandemic, from 2018-08-05 to 2020-03-08
84 weeks post-pandemic, from 2021-08-08 to 2023-03-12

IST 719 Spring 2023
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About the Dataset

The Broadway Grosses 2018-08-05 to 2023-03-12 dataset from playbill.com includes 4,813 rows with 15 variables. The data is organized by week and by show, each record in the dataset includes information about a specific week of a specific show. The fields included in the dataset are: the date on which the week ended, the show name, the theater name, the type of the show, the total gross revenue for the week, the average and the highest price of a ticket for the week, the %capacity, and the number of performances during the week, etc.

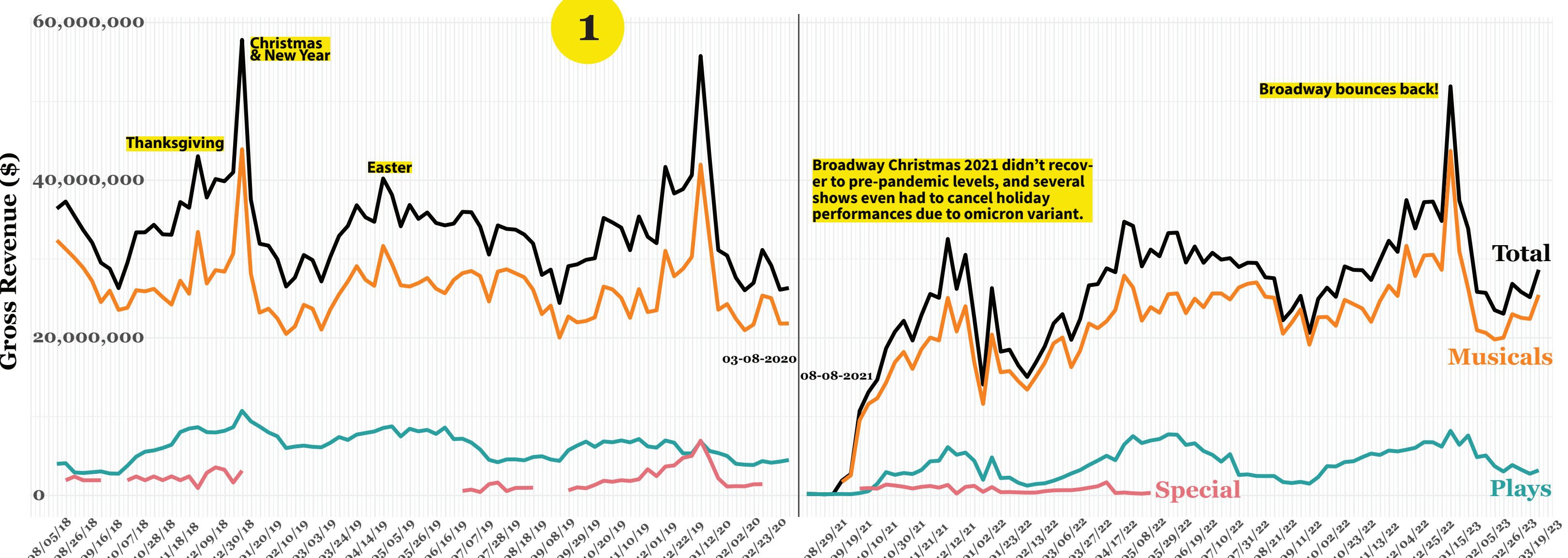
Story and Main Question

The COVID-19 pandemic had a profound impact on the Broadway industry, with shows forced to shut down for over a year due to health and safety concerns. Analysis of the Broadway grosses data (84 weeks pre-pandemic and the 84 weeks post-pandemic) reveals to us that despite several challenges, the industry has shown signs of resilience.
What is the time-series change in Broadway's grosses before and after the COVID-19 pandemic?

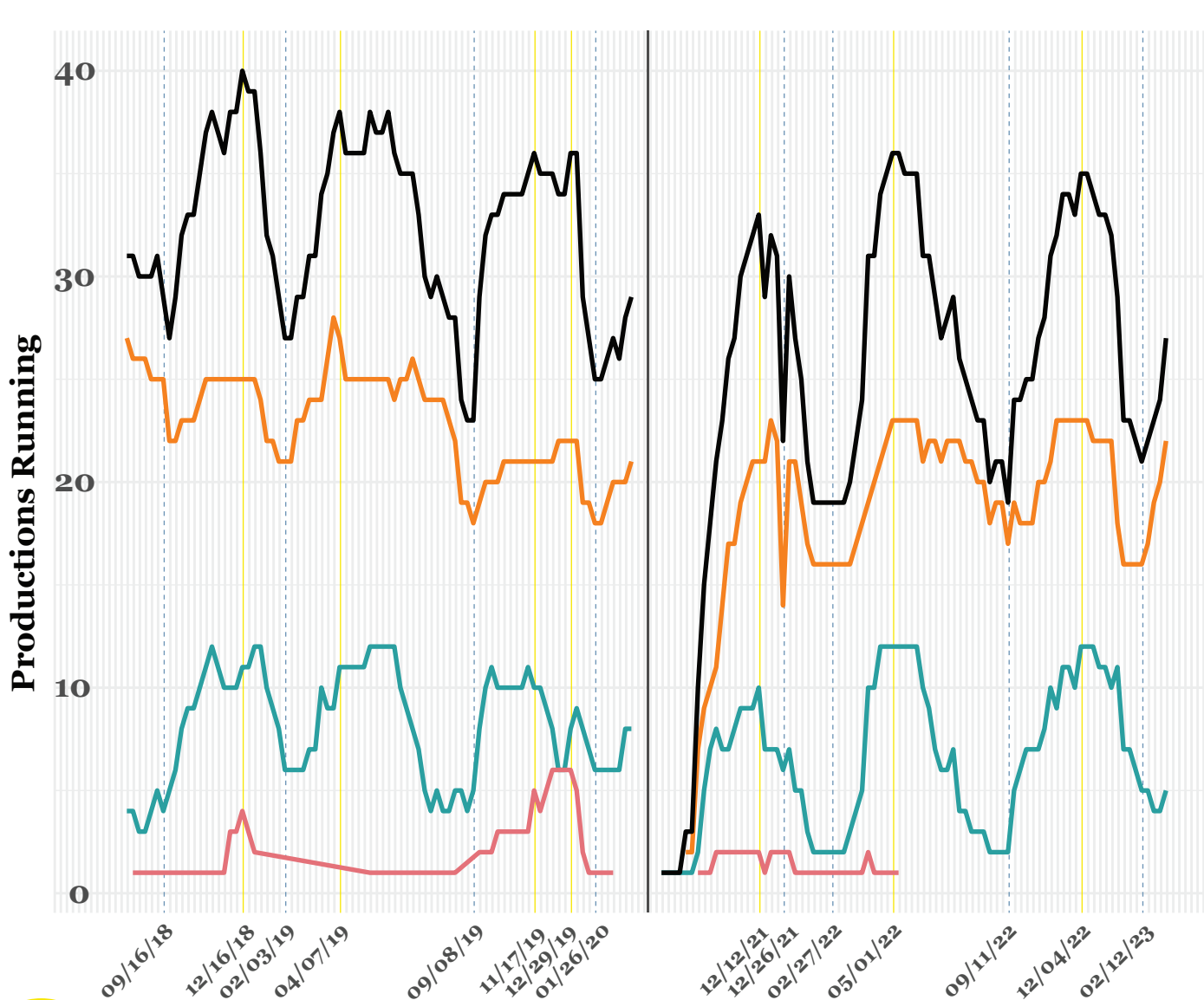
Motivation

My target audiences for this analysis and poster are theater enthusiasts and fans curious about the pandemic's impact on Broadway shows and the industry as a whole. Additionally, I aim to promote and recommend Broadway shows to a broader general audience.

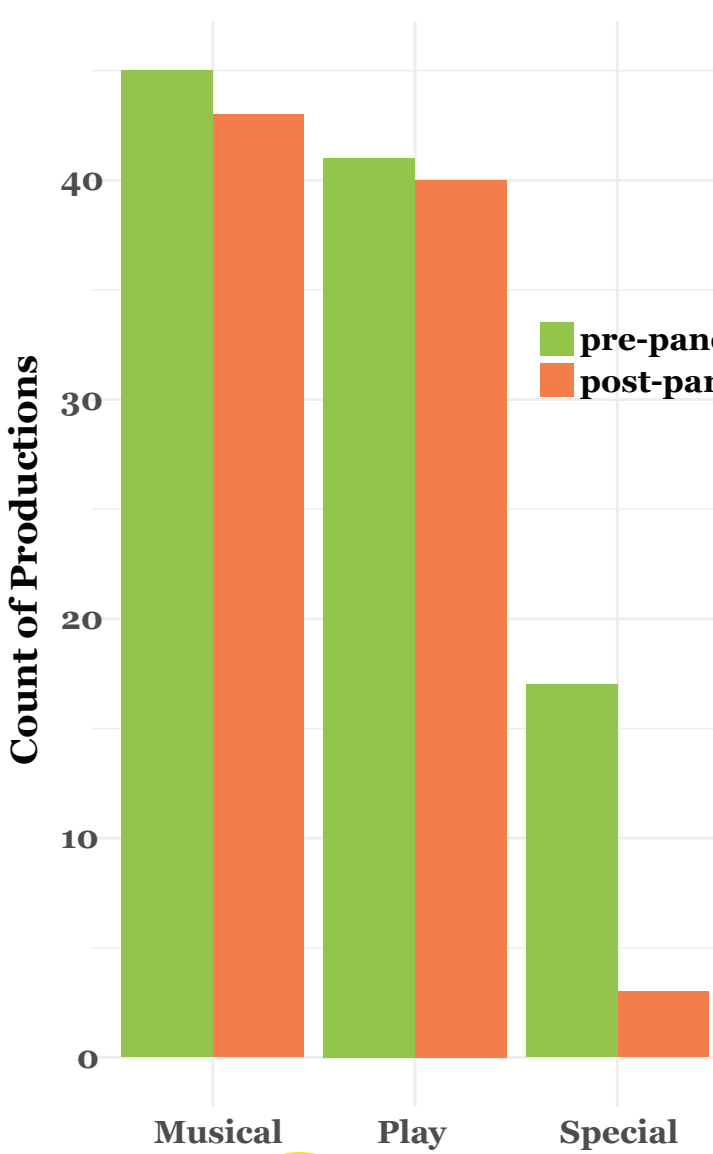
Total Grosses by Week



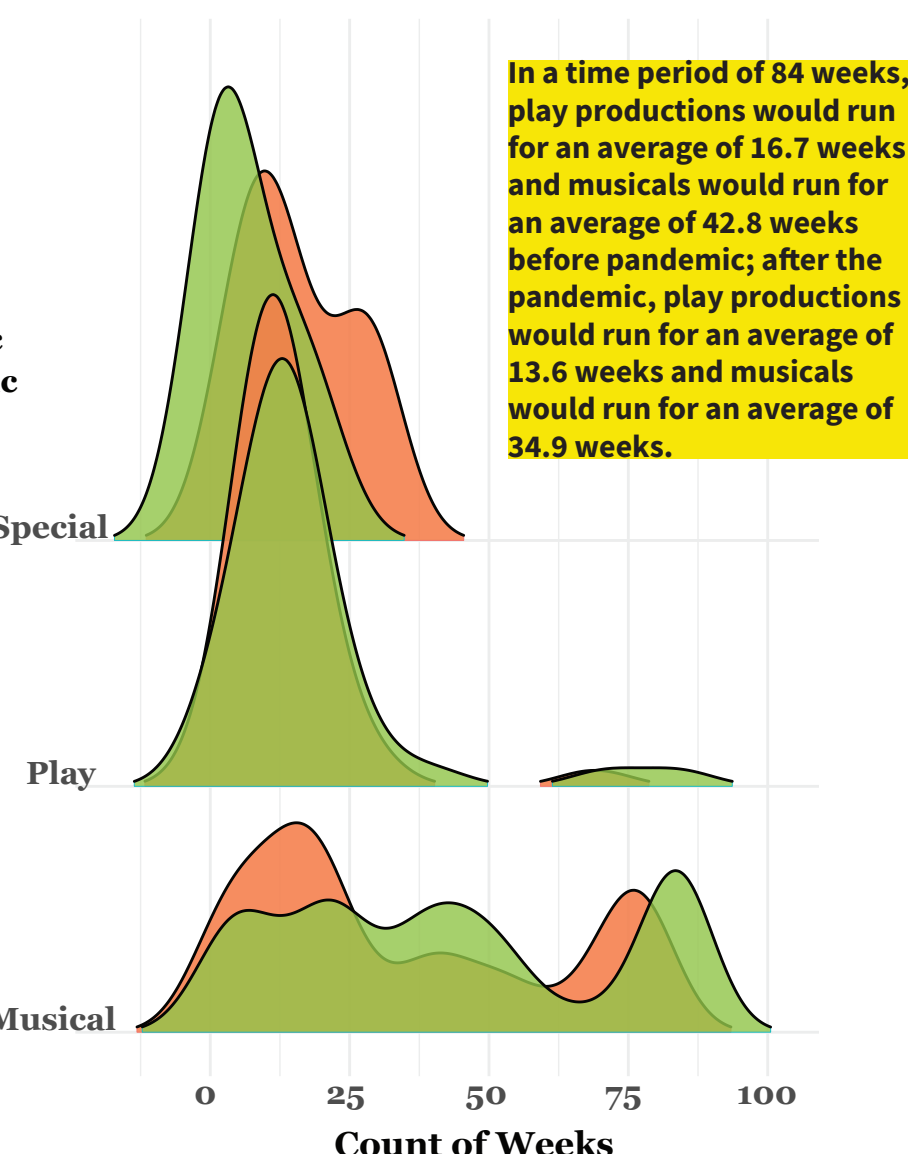
Productions by Week



Productions by Type



Production Running Weeks

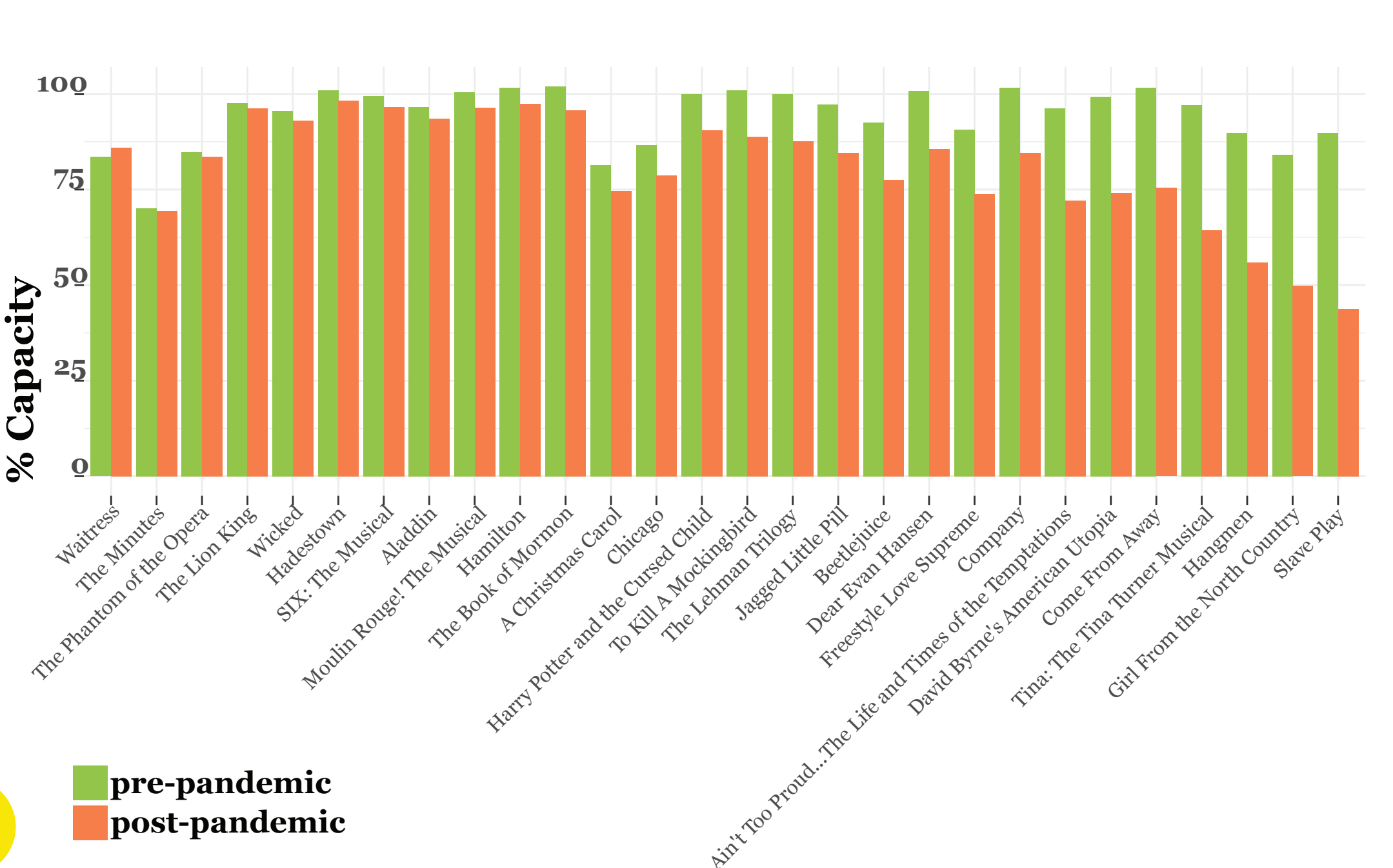


Sorted by %capacity difference pre-and post-pandemic, *Waitress* is the only show had a higher average %capacity post-pandemic, but had a short run.

4 well-known musicals closed in Aug-Sep 2022 (*Dear Evan Hansen*, *Come From Away*, *Company*, and *Tina*) had significant %capacity drops.

Despite the pre-pandemic success of *Girl from the North Country* in London and its 5-week run on Broadway, it played to a 19% capacity audience before its COVID closure on Jan. 23, 2022.

Average Capacity

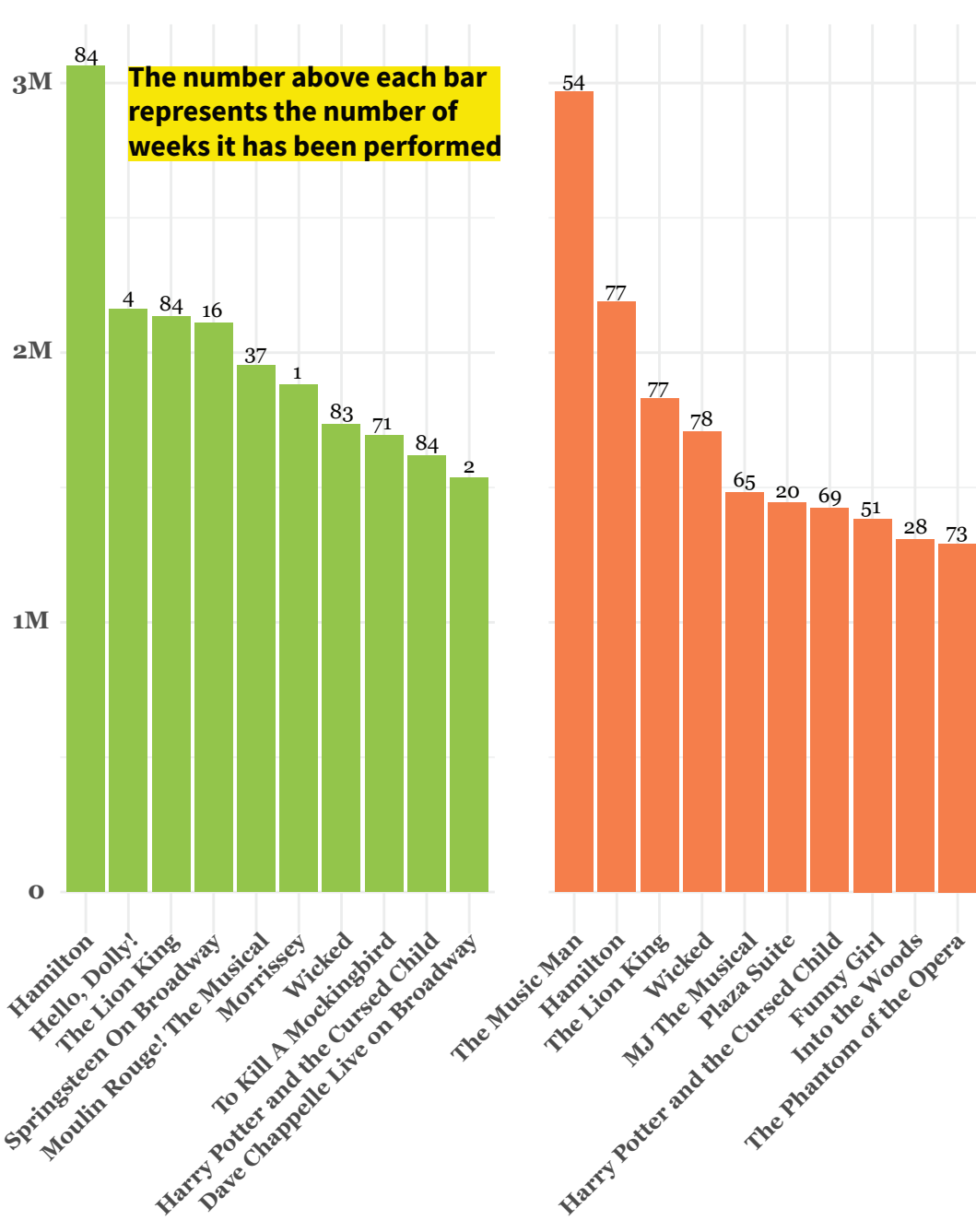


The weekly production activity on Broadway follows a rhythmic pattern with sinusoidal fluctuations on an annual basis. As of mid-2022, both the weekly grosses and number of productions running per week are gradually returning to pre-pandemic levels.

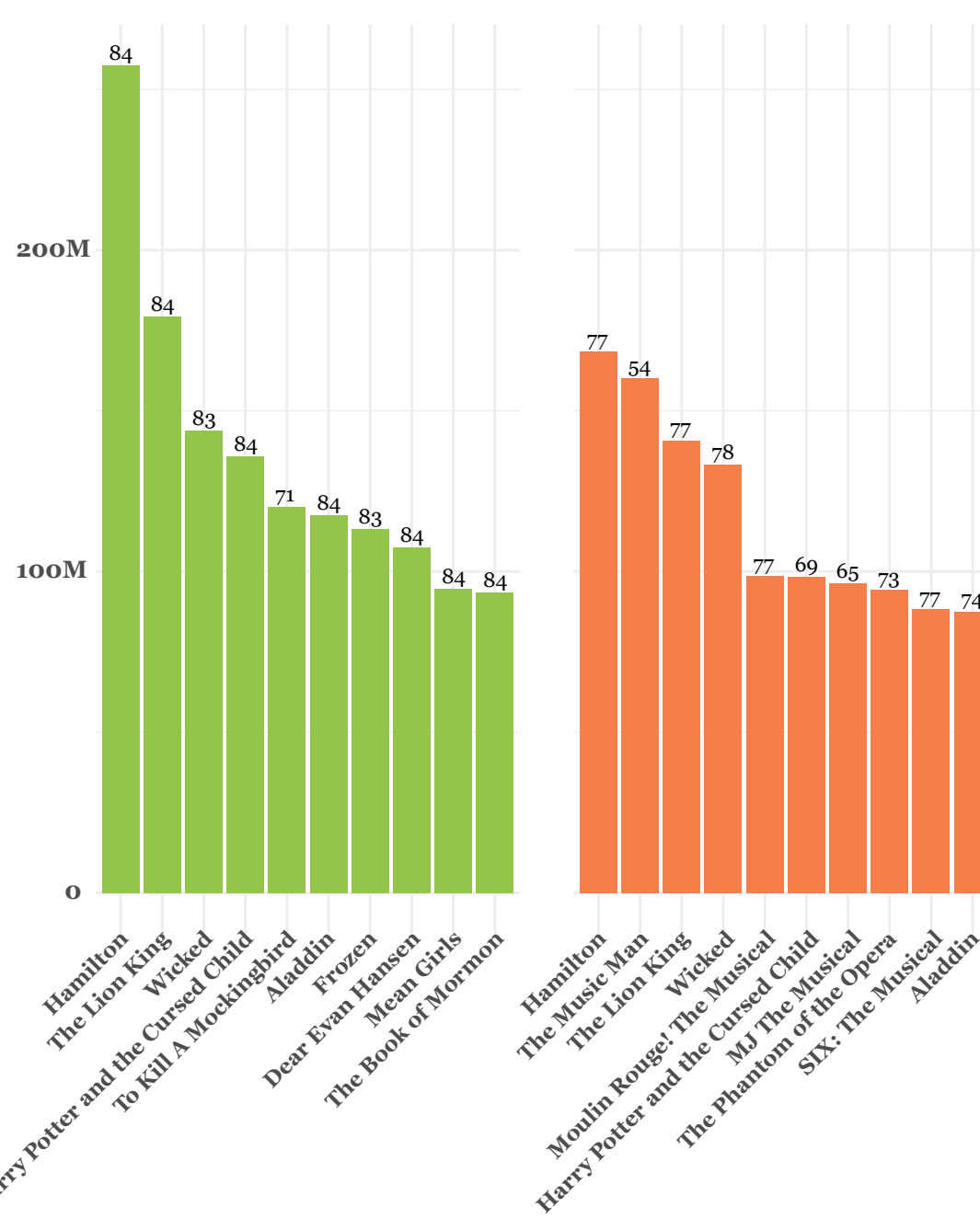
Although Broadway is famous for its musicals, plays also have a presence with a comparable number of productions. However, plays typically run for a shorter time period and are performed in theaters with fewer seats.

Fun fact: Despite occasional peaks up to 70%, musicals comprise fewer than half the shows playing during most weeks through 1970. Then steady growth, to a plateau of around 75% since the mid-1990s.

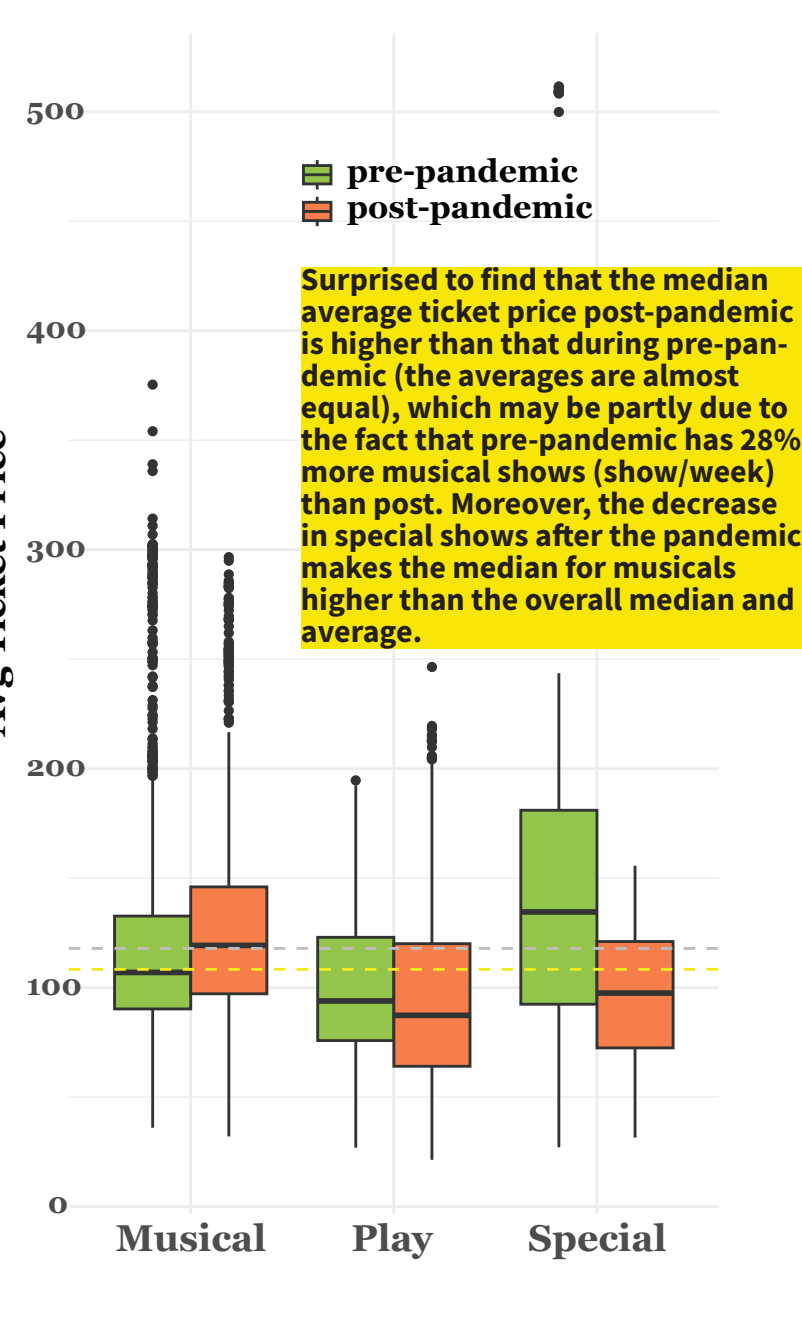
Top 10 Shows by Average Weekly Grosses



Top 10 Shows by Total Grosses

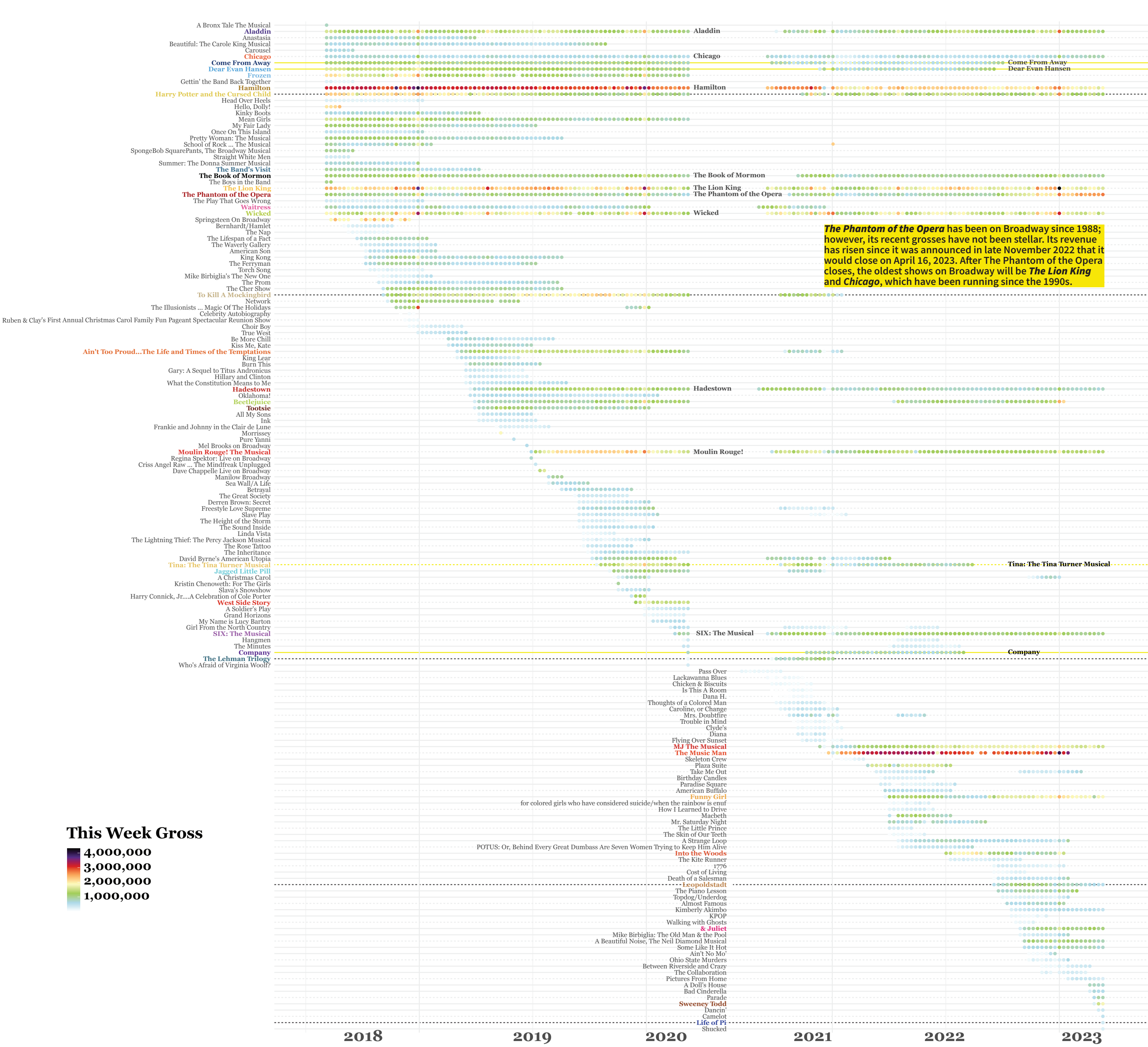


Average Ticket Price by Show Type

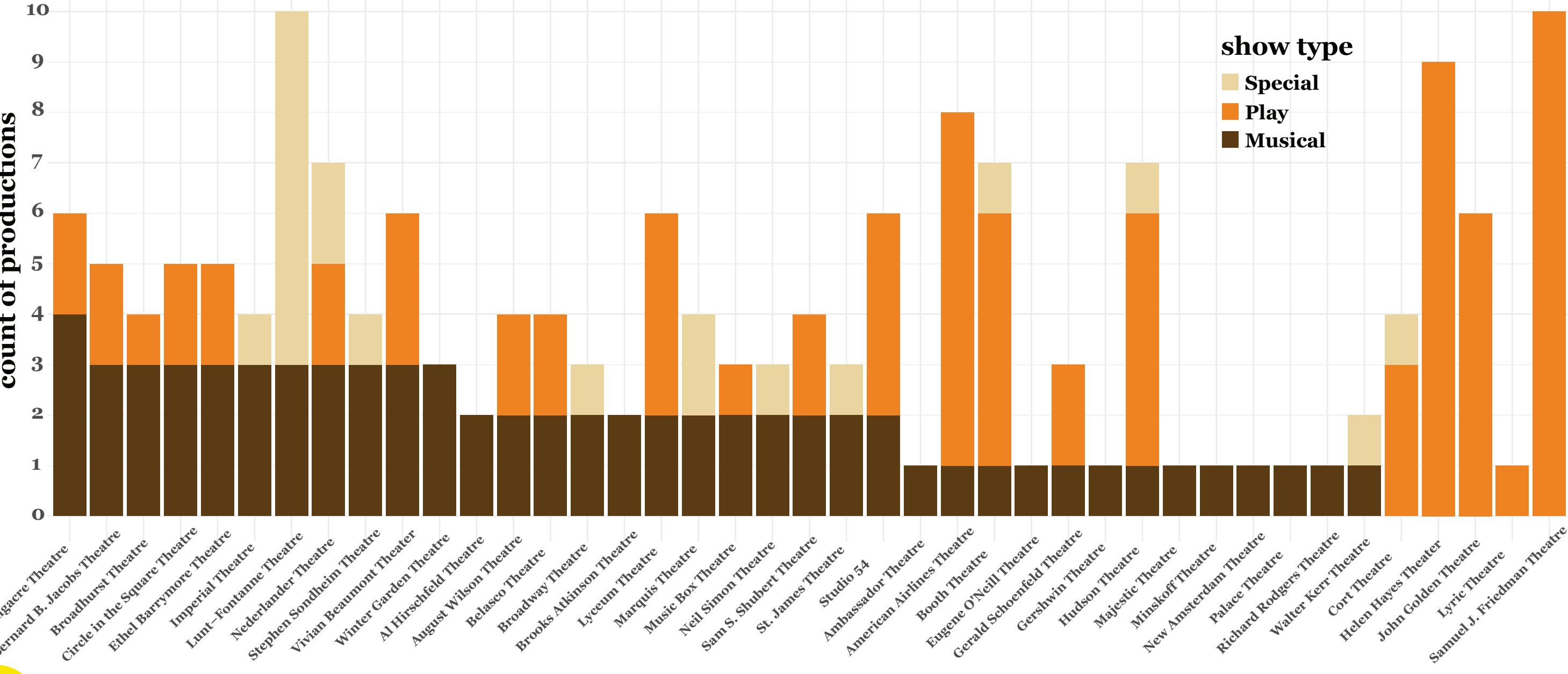


Hamilton is undoubtedly the all-time winner and *Harry Potter and the Cursed Child* is the best play at the box office. In addition, *The Music Man*, led by Hugh Jackman and Sutton Foster, was a huge hit after the pandemic. However, the production closed on January 15, 2023, rather than replace Jackman, who was set to depart for his next project. *Funny Girl*, and *MJ The Musical* are also the leading weekly box office grossers post-pandemic. Some other shows that have just been staged (e.g. *Sweeney Todd*, *Life of Pi*) are also worth watching, even though they don't appear in the top statistics.

Calendar w/ Weekly Grosses



Productions by Theater

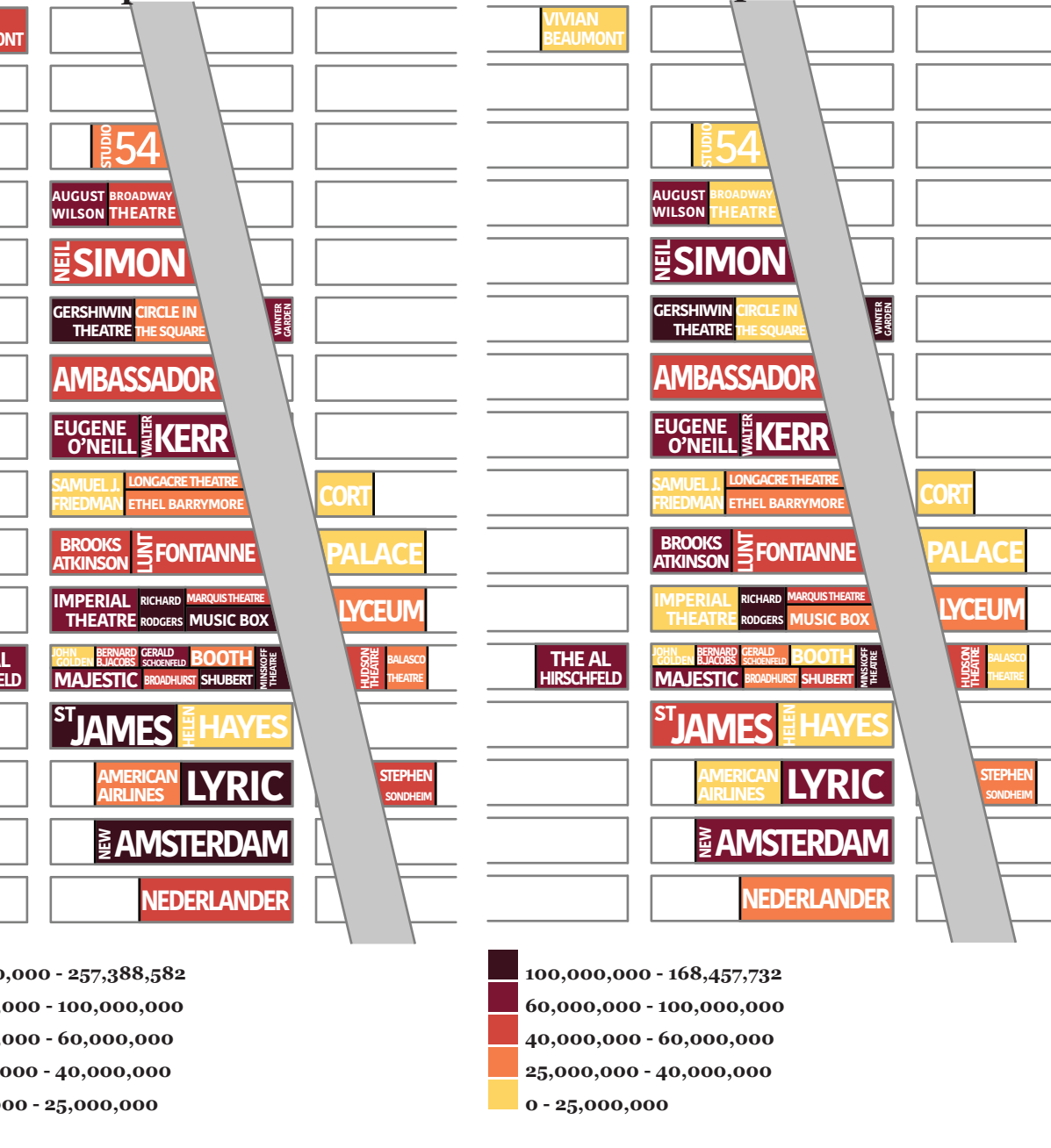


Although some theaters specialize in certain types of shows, most Broadway theaters host a mix of musicals, plays, and special shows. Typically, musicals run for more weeks and have fewer productions per theater, while plays have more productions but run for a shorter time period.

Seats in Theater



Theater Total Grosses



Post-pandemic, several theaters experienced lower total grosses, but exceptions included the Winter Garden Theatre (The Music Man), Neil Simon Theatre (MJ The Musical), and Brooks Atkinson Theatre (SIX: The Musical, now renamed Lena Horne Theatre).

More Broadway historic data and numbers from 1920-2020: <https://visualizingbroadway.com/> by Derek Miller, Professor of English at Harvard University, and his newest Five, Six, Seven, Eight: Broadway by the Numbers (Draft as of 2023-01-23)
Source: <https://www.playbill.com/grosses>
R Packages: tidyverse, ggplot2, ggridges, Adobe Illustrator
<https://github.com/XimengDeng>