

Wrangling the Billboard Top 100

Part A

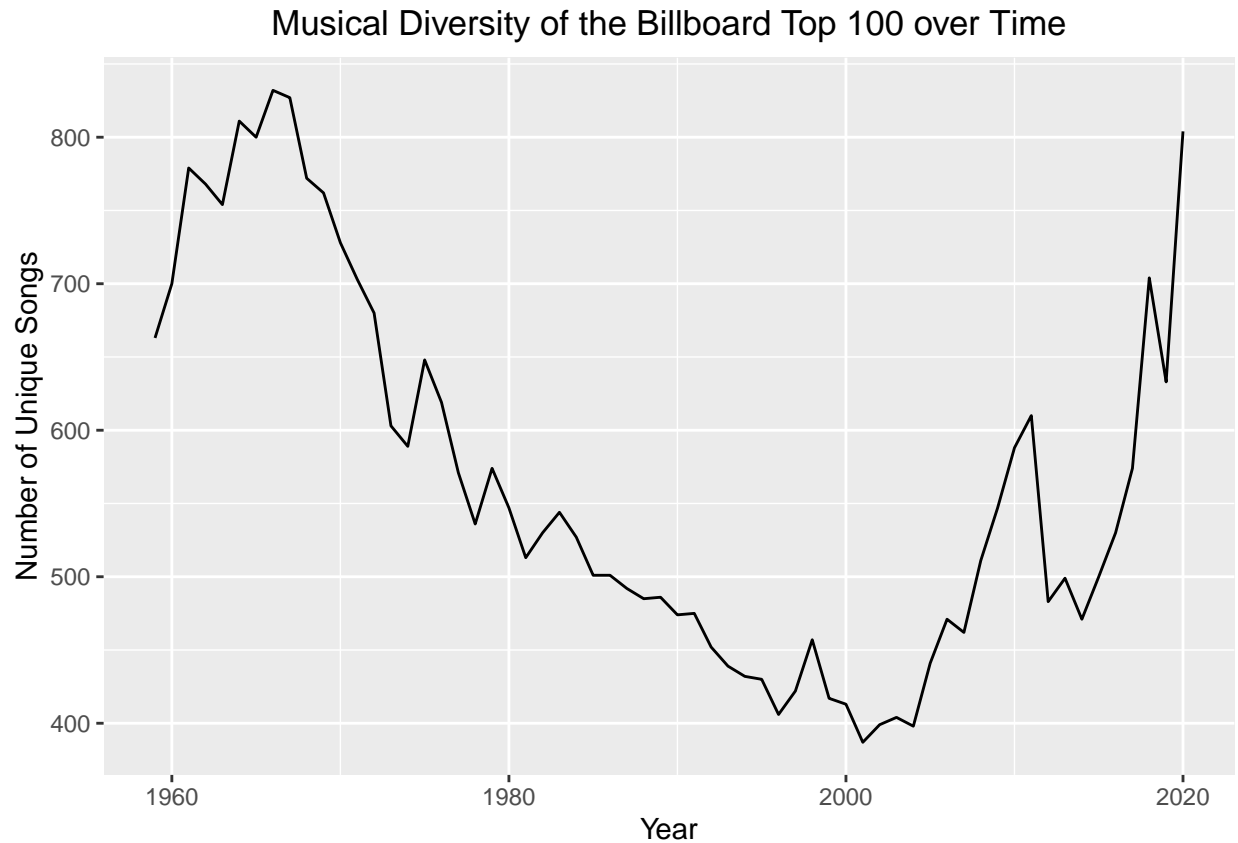
Top 10 Most Popular Songs since 1958 by Total Numbers of Weeks spent on Billboard Top 100

```
## # A tibble: 10 x 3
## # Groups:   performer [10]
##   performer          song          count
##   <chr>          <chr>          <int>
## 1 Imagine Dragons    Radioactive          87
## 2 AWOLNATION         Sail              79
## 3 Jason Mraz         I'm Yours           76
## 4 The Weeknd         Blinding Lights      76
## 5 LeAnn Rimes        How Do I Live        69
## 6 LMFAO Featuring Lauren Bennett & GoonRock Party Rock Anthem 68
## 7 OneRepublic        Counting Stars        68
## 8 Adele              Rolling In The Deep    65
## 9 Jewel              Foolish Games/You Were Meant~ 65
## 10 Carrie Underwood   Before He Cheats       64
```

The table above displays the top ten most popular songs since 1958 measured by the total numbers of weeks spent on Billboard Top 100 chart. Based on the table produced and our metric for popularity, we can see that “Radioactive,” by Imagine Dragons, is the most popular song since 1958 with 87 total weeks spent on the Billboard Top 100 chart with the remaining top 9 songs in the top 10 list ranging from 64 to 79 weeks spend on the Billboard Top 100 chart since 1958 up until week 22 of 2021 when our data set ends.

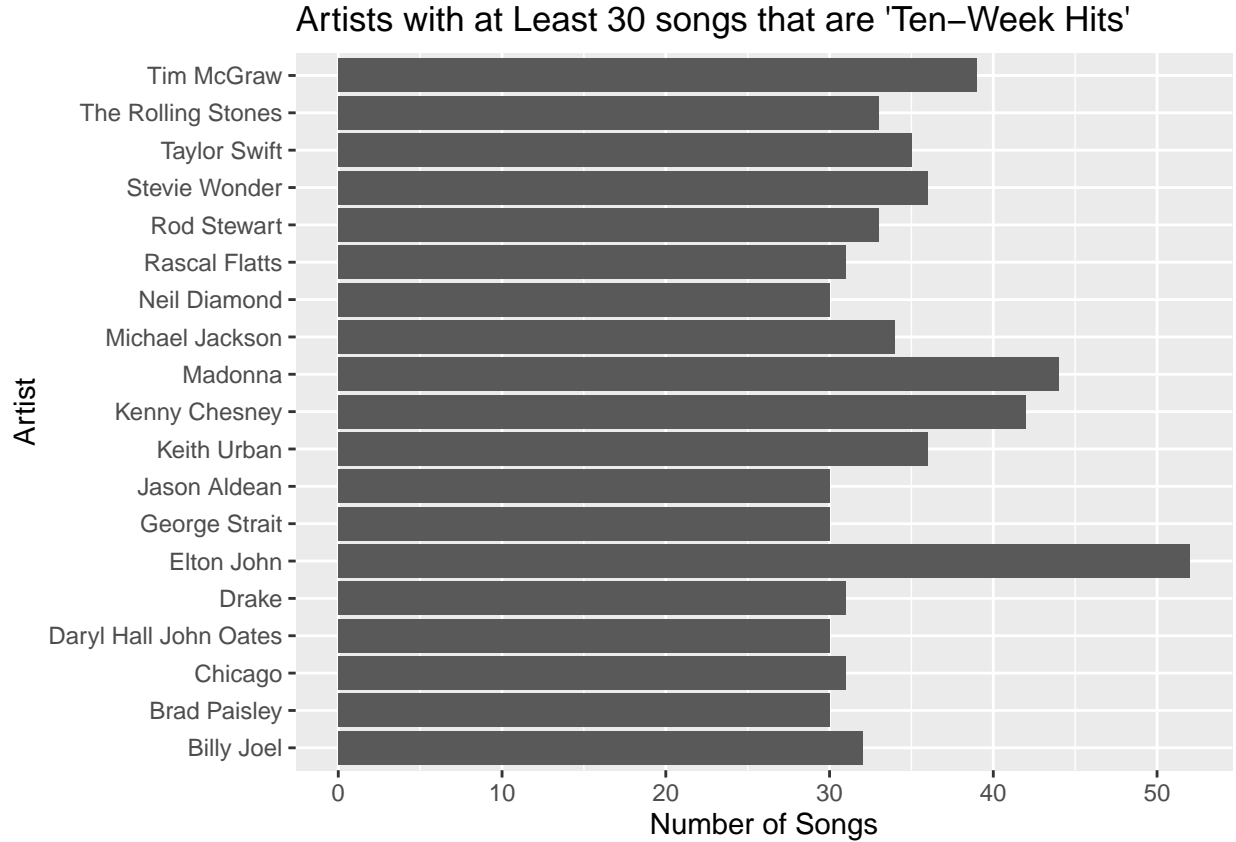
Part B

Below is a times series plot that displays the musical diversity of the Billboard Top 100 over time. The plot has the number of unique songs in a year’s Billboard Top 100 songs (y-axis) for every year (x-axis) from 1959 up until 2020.



Based on this plot, there are some interesting trends for the number of unique songs in the Billboard Top 100 songs. In the earlier years of the data set (1960s), the number of unique songs appear to peak. As our data set goes past the late 1960s, there is a steady decline in the number of unique songs by year until the early 2000s. After 2000, the musical diversity starts to increase with the number of unique songs in the Billboard Top 100 reaching levels similar to the beginning of our data set from the 1960s. These trends can be a result of very popular songs coming out in the 1980s through the early 2000s that stay in the charts for longer periods of time, making it harder for more unique songs to make the Billboard Top 100 songs chart.

Part C



The “Artists with at Least 30 songs that are ‘Ten-Week Hits’” figure above displays all the artists who have had at least 30 songs that were “ten-week hits,” which is defined as a single song that appeared on the Billboard Top 100 for at least ten weeks. The artists’ names are given on the y-axis and the amount of “ten-week hits” are displayed on the x-axis.

Based on the results, we can see that Elton John is the artist with the most ‘Ten-Week Hits’ followed by Madonna and Kenny Chesney.