

Top Christmas Songs

MTH 161 – Fall 2024

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2024-11-27

Part 1: choose a dataset and propose a question

Due Nov. 15th

Creating a song that hits the top charts is the highest aspiration for many song writers and singers. The songs in the top charts often reflect the preferences of the time, be it Disco in the 70's or Pop in the 2000's. It is incredibly difficult to make it to the top, as millions have to listen to your song. However, it is even harder to make it as a Christmas song. Christmas, though a popular holiday, definitely creates limitations for its songs. Often, people are not in the holiday mood or do not celebrate Christmas. Still, over the years, especially during the holiday season, Christmas songs have powered their way to the top, charting in the top 100 songs. Since 1958, there has been 337 times that a Christmas song has charted on the Billboard Top 100. Some stay at the top for weeks, others get one week of fame. In this data set ([data/2019/2019-12-24/christmas_songs.csv](#)) from the source TidyTuesday, it shows all the top charting Christmas songs from 1958 to 2017 on the Billboard Top 100. It includes the following variables:

codebook

- ``weekid``: the exact date the song charted (m/d/y)
- ``week_position``: the position out of 100 on the chart
- ``song``: the name of the song
- ``performer``: the artist who sang the song
- ``songid``: the name of the song and the artist (ex: Run Rudolph RunChuck Berry)
- ``instance``: how many individual times the song charted
- ``previous_week_position``: the position of the second the week before, if charted for more than one week

- ``peak_position``: the highest position out of 100 the song reached
- ``weeks_on_chart``: how many consecutive weeks the song charted
- ``year``: the exact year the song charted
- ``month``: the exact month the song charted
- ``day``: the exact day the song charted

Using this data set, I will answer the question: has the average `weeks_on_chart` of Christmas songs changed of the `years`, from 1958 to 2017? Answering this question could help determine how both the quality and the popularity of Christmas songs may have changed over the years.