# Campaign Success in Relations to Launch Dates and Funding Goals

## Overview of Project

### Purpose

Louise is an up-and-coming playwright pursuing statistical knowledge in regards to launch dates and funding goals to ensure her play, Fever, has the best chance of succeeding.

## Analysis and Challenges

### Analysis of Outcomes Based on Launch Date

Between the years of 2010 and 2017, the reported successful theater launches from January to April were between 56 and 71. Once May approached, there was an increase of successful launches which also happens to be the peak month with a value of 111 launches. Following May there was a consistent downward trend for the remainder of the year, a slight increase in October, and the minimum reported successful launches were in December with a value of 37. Failed theater launches were fairly consistent for the months of December through April, and September with launches between 33 and 40. The minimum failed launches were reported in the month of November at 31. May through August, and October had approximately 47 to 50 failed launches with the maximum failed launches being reported in May and October. Canceled theater launches ranged from 1 to 7 with the maximum number being in January and no reported values for October.

### Analysis of Outcomes Based on Goals

In regards to play outcomes based on fundraising goals; the maximum percent of successful play launches, 76%, were when the fundraising goal was less than $1000. As the goal value increased, the percent of successful launched plays gradually decreased until the $25,000 to $29,999 range at 20%. Successful launch percentage then increased until $35,000 to $39,999 at 67%, plateaued until $49,999, and then had a drastic decline for any goals greater than $50,000 resulting in 0 to 13% success. With the percentage of canceled plays being 0%, the percentage of failed launches as goal fundraising increased is a mirror image of the successful percentages. The minimum percent of failed play launches, 24%, were when the fundraising goal was less than $1000. As the goal value increased, the percent of failed launched plays gradually increased until the $25,000 to $29,999 at 80%. Failed percentage then decreased until $35,000 to $39,999 at 33%, plateaued until $49,999, and then had a drastic incline for any goals greater than $50,000 resulting in 100% to 88% failed.

### Challenges and Difficulties Encountered

One problem that may be encountered would be the conversion of time stamps. Someone with no knowledge of this formatting would perhaps look at the initial data for date creation and date ended as a random sequence of numbers. Through this class and a little bit of research, I became familiar with the equation needed for this conversion and the unix epoch concept. Another obstacle that could arise would be the execution of the pivot table. To someone who is novice in excel, figuring out which fields to place in each category and how to create the most aesthetically pleasing graph for analysis would be difficult. Additionally, the countif() feature could be rather difficult, making sure all parameters are met without creating any errors or unwanted cell shifts. Through trial, error, and repetition these difficulties would most likely retreat.

## Results

- What are two conclusions you can draw about the Outcomes based on Launch Date?

Based on the graph of launch dates per months there are a couple of conclusions we can reach about the ideal time to launch a theater. It appears that the best time of year for a successful launch date would be May through July, with the most successful of the three being May. Failed Launch dates may have also peaked May through August and October; however, the area under the curve is significantly higher for successful launches from May to July. The worst time to schedule a launch would be December with the number of failed launches and number of successful launches being about equal, whereas the rest of the graph shows the successful launches trending higher than the failed launches.

- What can you conclude about the Outcomes based on Goals?

According to the analysis of outcomes based on goals collected from the database, goals less than $19,999 and $35,000 to $44,999 the percentage of successful plays is greater than the percentage of plays that failed. The highest percent of successful plays is less than $1000.

- What are some limitations of this dataset?

One limiting factor is that we do not know the source of this data and whether it was reliable. Coming to a conclusion from a set of data that doesn’t state where they pulled information from could be misleading. There may be some possible outliers or failed/cancelled plays that may not have been real or data that was missed and could have impacted the outcome of our analysis. The date range of data was from 2010 to 2017 and if we were going to try to launch a play in 2022, the data doesn’t take into account inflation or events that might be impactful to the theater industry. Location was not taken into account when forming conclusions about the most successful time of year and the best range of fundraising goals for launching a play. New York may be a great place to launch a play, whereas a play launch in rural Utica, WI may not be as successful. one country may have a high success rate for theater whereas one location may not be suited for the launch of a play.

- What are some other possible tables and/or graphs that we could create?

We could apply some filter to the launch dates to be more recent as well as filter outcomes based on goals to the location of where Louise plans on launching her play. Our first graph was only filtered by Theater and includes things other than plays, such as musicals and spaces, which could have impacted the analysis slightly. Another aspect we could explore would be the average donation made by a certain number of backers for successful and failed launches to see if there is a statistical point between the two factors that would insure a higher chance of success. Basic line graphs could be made for pledge amounts and how many backers there were for an idea of approximately how many backers were needed in the past for similar plays to be successful. Considering all of these factors could ensure that Louise has the best chances to succeed in the launch of her play, Fever.