Create a report in Microsoft Word, and answer the following questions:

- **Given the provided data, what are three conclusions that we can draw about crowdfunding campaigns?**
    - Crowdfunding happened mostly in the US.
    - The theater is the most popular category, but it appears as the highest failed rate; while the journalism is the least category, but it has zero failed.
    - The world music is lowest and plays value is highest. Web category has the highest successful rate.
    - Monthly outcomes range from 73 to 94.
- **What are some limitations of this dataset?**

    ➔ Unable to identify the percentage of outcomes.
- **What are some other possible tables and/or graphs that we could create, and wh**at additional value would they provide?

    ➔ Percentage of outcomes and determine the central tendency of statistics.

    ➔ count the number of backers and the successful rate

Justification of whether the mean or median better summarizes the data?

To determine whether the mean or the median better summarizes the data for the successful and failed backers counts, we can analyze the provided statistics:

Successful Backers:

- **Mean:** 851.15
- **Median:** 201
- **Mode:** 85
- **Min:** 16
- **Max:** 7295
- **Variance:** 1,603,373.732
- **Standard Deviation:** 1,266.24

Failed Backers:

- **Mean:** 585.62
- **Median:** 114.5
- **Mode:** 1
- **Min:** 0
- **Max:** 6080
- **Variance:** 921,574.6817
- **Standard Deviation:** 959.99

Analysis:

1. **Successful Backers:**
    - The mean (851.15) is significantly higher than the median (201). This suggests that there are some campaigns with a very high number of backers (outliers) that are pulling the mean upward.
    - The median (201) provides a better representation of the central tendency for successful campaigns because it is less affected by these extreme values.
2. **Failed Backers:**
    - Similarly, the mean (585.62) is higher than the median (114.5). This indicates that there are also some campaigns with a high number of backers among the failed campaigns, which skews the mean.
    - The median (114.5) again serves as a better summary of the central tendency, as it reflects the center of the dataset without being influenced by outliers.

Conclusion:

In both cases, the median is a better measure of central tendency than the mean. The mean is affected by extreme values (outliers), while the median provides a more accurate representation of the central tendency of the data. Therefore, for both successful and failed backers counts, the median better summarizes the data.

Use your data to determine if there is more variability with successful or unsuccessful campaigns. Does this make sense? Why or why not?

Analysis of Variability:

1. **Variance and Standard Deviation**:
    - Successful campaigns have a higher variance (1603373.73) and a higher standard deviation (1266.24) compared to unsuccessful campaigns, which have a variance of 921574.68 and a standard deviation of 959.99.
    - This indicates that there is more variability in the number of backers for successful campaigns.
2. **Interpretation**:
    - The higher variance and standard deviation for successful campaigns suggest that they can attract a wide range of backers, with some campaigns receiving a significantly higher number of backers (as indicated by the max value of 7295.00).
    - In contrast, unsuccessful campaigns tend to have a more consistent number of backers, which might indicate that they generally fail to attract many supporters.

Conclusion:

Yes, it makes sense to conclude that there is more variability with successful campaigns than with unsuccessful ones. This is evident from the statistical measures of variance and standard deviation, indicating that successful campaigns can vary widely in their backer counts, whereas unsuccessful campaigns show less variability.