

Non-Technical Report – Ian Keller

Dear SonicWave CEO,

I hope this message finds you well. My name is Ian Keller and I was recently hired as Data Science Consultant for the firm. I was in charge of a project to help SonicWave Production's understand what factors are the most important in determining the popularity of a song to help your music professionals identify strong markets for song selection and promotion. My takeaways are the following:

- 1) Through our in-depth research methodologies our findings showed strong statistical evidence towards the genre of Pop to be the biggest predictor of a popular song. We highly recommend that SonicWave Production's pursues, promotes, and distributes song opportunities within this area of music.
- 2) Additionally, through our research we have found that the duration of a song is important in increasing a songs popularity. We feel that a song should be around 3 minutes long for the highest probability of becoming popular.
- 3) Lastly, our findings have shown that valence has a negative effect on a song's popularity. Valence can be defined as the musical positiveness conveyed by a song. This suggests that songs with a more negative emotional tone, such as sadness, depression, or anger, might be more popular among listeners. We believe this can be interpreted as music that is down to earth and relatable to users as opposed to overtly happy and cheerful music.

To conclude, our analysis reveals valuable insights into the drivers of song popularity for SonicWave Productions. Firstly, the Pop genre stands out as a significant predictor, suggesting a strategic focus on pursuing, promoting, and distributing songs within this genre to capitalize on

market opportunities. Additionally, we found that song duration plays a pivotal role, with an optimal length of around 3 minutes increasing the likelihood of a song's popularity. Surprisingly, our research uncovered a negative relationship between valence and popularity, indicating that songs with a more negative emotional tone may resonate more strongly with listeners. These findings provide actionable guidance for SonicWave's music professionals, enabling them to make informed decisions in song selection, promotion, and distribution to drive success in the competitive music industry landscape. It is important to understand that these results are not holistic and other song characteristics are important to consider such as release date, artist name, collaborations, and current cultural music trends. With a comprehensive understanding of these factors, SonicWave Productions can continue to innovate and adapt its strategies to remain at the forefront of the dynamic music industry landscape.