



**NAME:** Church Music Acceptability Prediction Model  **TICT**


**DATE:** September 5, 2024 4:43 AM

**DESCRIPTION OF TECHNOLOGY**  
 In the SDA Church Community, many individual churches can have conflicts over what kinds of music should/ shouldn't be used or featured during weekly worship services on Saturday. This has caused a split of opinion at an SDA church in Eindhoven specifically. I created a prediction model that attempts to predict how 'acceptable' a song would be for use in church based on the types of songs that have been...


**HUMAN VALUES** 

One of the goals of creating the model is to highlight that, while the church doesn't have specific requirements for acceptable music in church, biases are still unconsciously used to decide between 'acceptable' and 'unacceptable' church music. Successfully creating a model that predicts acceptability would make it clear that this bias does indeed exist. This realization, in theory, could shift how the conversation of music in church is approached and change the perspective of many church members on this topic.


**TRANSPARENCY** 


**IMPACT ON SOCIETY** 

There are differing opinions over what music is acceptable for use in Seventh-Day Adventist (SDA) Churches. There are many reasons for these differences, but in the case of Eindhoven's SDA Church, these differences have helped lead to a split in the congregation, where groups of members don't attend or participate in church services and activities. Splits like this could weaken the church's message and hinder it's ability to positively impact its local community.


**STAKEHOLDERS** 

- Leader of Eindhoven SDA Church Music Department
- Clergy (Pastor, Elders) of Eindhoven SDA Church
- Regular members of Eindhoven SDA Church


**SUSTAINABILITY** 


**HATEFUL AND CRIMINAL ACTORS** 

The model is trained using musical feature metadata from Spotify and song lyrics scraped from Genius. While Spotify allows their data to be used for analysis under fair use, Genius lyrics are only allowed for personal use. If lyrics are also used to train the prediction model, then use of Genius' lyric database could break copyright laws. In the future, another source for lyrics should be found if this is implemented.

**DATA** 


Data can only go so far in fully representing the biases presented by the church community over music usage. The concept of condensing the church's opinion into a numerical variable is in and of itself reductive to the complex factors influencing just one person's opinion. The data set being used simplifies reality in that sense. Shortcomings like these are taken into account when developing the conclusion of this research and when creating the final product.

**FUTURE** 

**PRIVACY** 

No. The musical feature & lyrics data used to train the model is publicly available. There is data on the artist for each song in the dataset, but that is also publicly available information.

While acceptability scores were sourced from individual members of the church community, the means by which these scores were collected did not feature anything that would collect personal data.

**INCLUSIVITY** 


Bias may likely be built into the model due to both the nature of the situation being modelled and the methods used by the researcher to build the dataset. The data on acceptability was collected by the researcher, but the songs chosen to collect this data on was already selected with a certain level of bias from the researcher. Many songs selected were songs likely to have a higher acceptability score, chosen due to the researcher's experience with songs used in the congregation in the past.

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# QUICKSCAN - CANVAS - HEURISTIC Music Acceptability Prediction Model

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**HUMAN VALUES** 

**How is the identity of the (intended) users affected by the technology?**

To help you answer this question think about sub questions like:

- If two friends use your product, how could it enhance or detract from their relationship?
- Does your product create new ways for people to interact?...

**TRANSPARENCY** 

**Is it explained to the users/stakeholders how the technology works and how the business model works?**

- Is it easy for users to find out how the technology works?
- Can a user understand or find out why your technology behaves in a certain way?
- Are the goals explained?
- Is the idea of the technology explained?
- Is the technology company transparent about the way their...

**IMPACT ON SOCIETY** 

**What is exactly the problem? Is it really a problem? Are you sure?**

Can you exactly define what the challenge is? What problem (what 'pain') does this technology want to solve? Can you make a clear definition of the problem? What 'pain' does this technology want to ease? Whose pain? Is it really a problem? For who? Will solving the problem make the world better? Are you sure? The problem definition will help you to determine...

**STAKEHOLDERS** 

**Who are the main users/targetgroups/stakeholders for this technology? Think about the intended context by...**

When thinking about the stakeholders, the most obvious one are of course the intended users, so start there. Next, list the stakeholders that are directly affected. Listing the users and directly affected stakeholders also gives an impression of the intended context of the technology.

...

**SUSTAINABILITY** 

**In what way is the direct and indirect energy use of this technology taken into account?**

One of the most prominent impacts on sustainability is energy efficiency. Consider what service you want this technology to provide and how this could be achieved with a minimal use of energy. Are improvements possible?

**HATEFUL AND CRIMINAL ACTORS** 

**In which way can the technology be used to break the law or avoid the consequences of breaking the law?**

Can you imagine ways that the technology can or will be used to break the law? Think about invading someone's privacy. Spying. Hurting people. Harassment. Steal things. Fraud/ identity theft and so on. Or will people use the technology to avoid facing the consequences of breaking the law (using trackers to evade speed radars or using bitcoins to launder...

**DATA** 

**Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into...**

There are fundamental issues with data. For example:

- Data is always subjective;
- Data collections are never complete;
- Correlation and causation are tricky concepts;
- Data collections are often biased;...

**FUTURE** 

**What could possibly happen with this technology in the future?**

Discuss this quickly and note your first thoughts here. Think about what happens when 100 million people use your product. How could communities, habits and norms change?

**PRIVACY** 

**Does the technology register personal data? If yes, what personal data?**

If this technology registers personal data you have to be aware of privacy legislation and the concept of privacy. Think hard about this question. Remember: personal data can be interpreted in a broad way. Maybe this technology does not collect personal data, but can be used to assemble personal data. If the technology collects special personal data (like...

**INCLUSIVITY** 

**Does this technology have a built-in bias?**

Do a brainstorm. Can you find a built-in bias in this technology? Maybe because of the way the data was collected, either by personal bias, historical bias, political bias or a lack of diversity in the people responsible for the design of the technology? How do you know this is not the case? Be critical. Be aware of your own biases....

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