

Worship Setlist Generator



Using NLP to Recommend Songs Based on Your
Church's Weekly Message

Overview

- Problem Statement
- Data Collection
- Natural Language Processing
- Worship Setlist Generator
- Next Steps
- Q&A



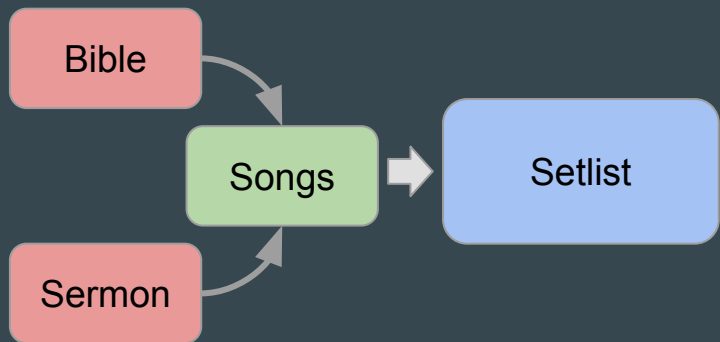
Context

- CCM
- Christian Music vs. Worship Music
- Church gigs
- Domain knowledge



The Problem

- Message: Music & Sermon
- Coordination
- RAM



The Solution

Create a “worship setlist generator” that uses Natural Language Processing (NLP) to find the most appropriate songs for each service based on key Bible verses and themes planned for that service.

Data Collection



- Song data: [PraiseCharts.com](https://www.praisecharts.com/)
 - “Top 40” Blogs (‘04-’20)
 - Lyrics/Metadata (artist, tempo, etc.)
- Bible data: [BibleStudyTools.com](https://www.biblestudytools.com/)
 - Top 5 translations
 - Top paraphrase

Data: Closer Look

Song Data

- 250+ songs
- Artist, tempo, lyrics, popularity

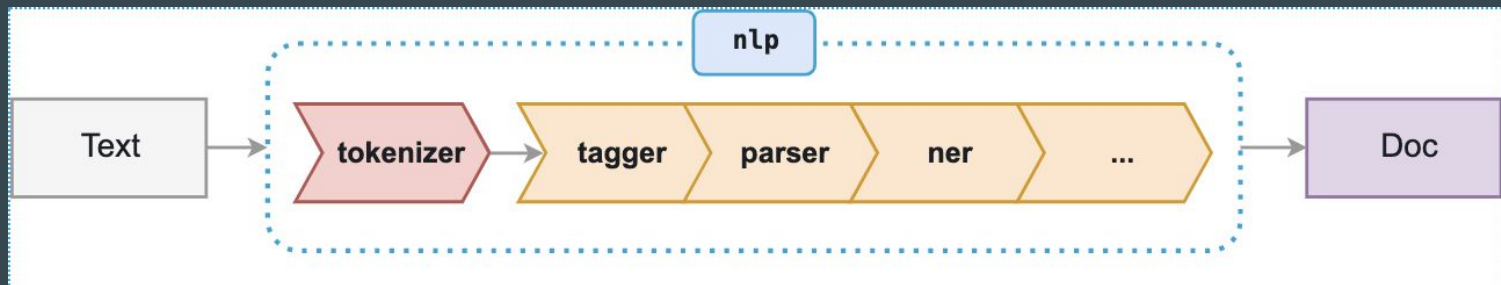
Bible Data

- Versions:
 - New International Version
 - King James Version
 - New King James Version
 - English Standard Version
 - New Living Translation
 - The Message
- 31k+ verses

Song Lyrics	Bible Text
1. Come	1. Come
2. God	2. God
3. Heart	3. Israel
4. Jesus	4. King
5. Let	5. Lord
6. Lord	6. Man
7. Love	7. People
8. Oh	8. Say
9. Praise	9. Shall
10. Sing	10. Son

Natural Language Processing

- “spaCy” library



- Tokenization
- Lemmatization
- Stopwords
- Vectorization

Natural Language Processing

John 3:16 (NIV): “For God so loved the world that he gave his one and only Son, that whoever believes in him shall not perish but have eternal life.”

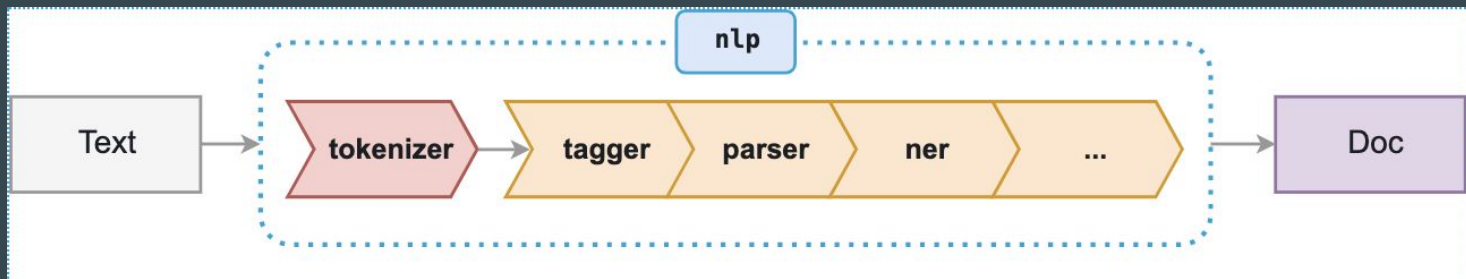


“god love world give son believe perish eternal life”

Amazing Grace: “Amazing grace how sweet the sound that saved a wretch like me I once was lost, but now I’m found was blind, but now I see”

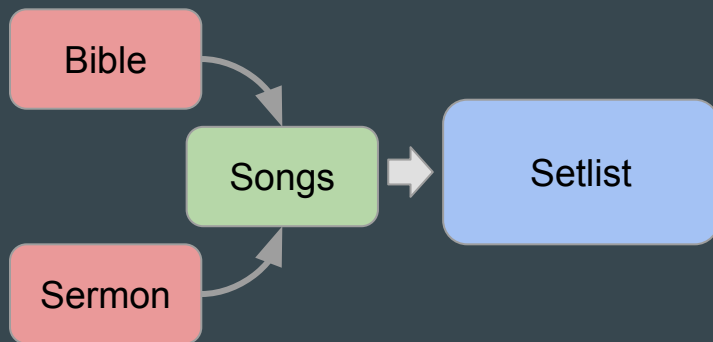


“amazing grace sweet sound save wretch like lose find blind”



Worship Setlist Generator

- User inputs
 - Verses (up to 3)
 - Themes/keywords
 - Set length
 - Praise/Worship flow
- NLP (spaCy) similarity score
 - Compares inputs to song lyrics
- Returns setlist of songs!



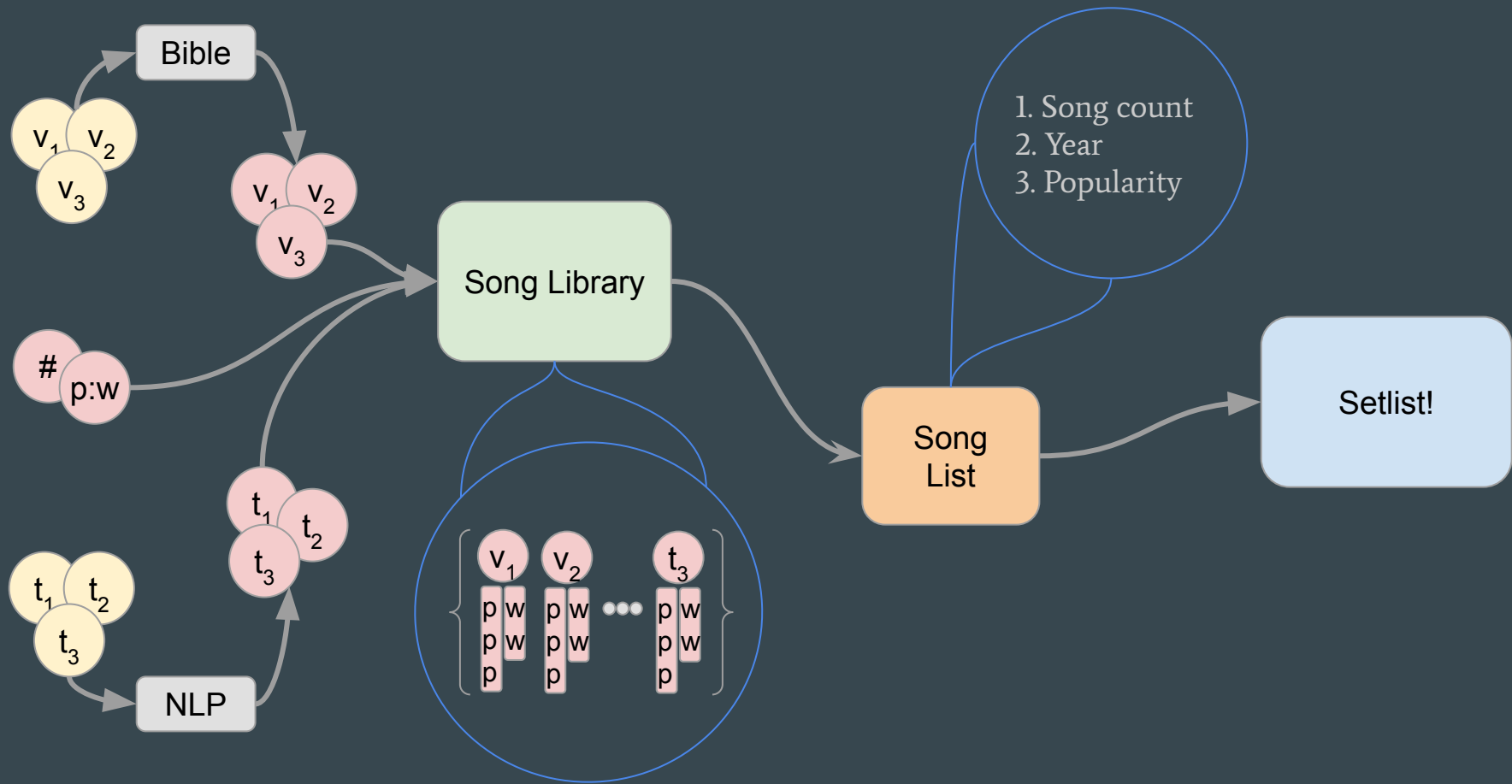
Problem Statement

Data

NLP

Product

Next Steps



“Model Testing”

Bible Verse (NIV)

Genesis 50:20: “You intended to harm me, but God intended it for good to accomplish what is now being done, the saving of many lives.”

Luke 15:4: “Suppose one of you has a hundred sheep and loses one of them. Doesn’t he leave the ninety-nine in the open country and go after the lost sheep until he finds it?”

1 John 4:4: You, dear children, are from God and have overcome them, because the one who is in you is greater than the one who is in the world.”

Song

See A Victory: “You took what the enemy meant for evil and You turned it for good”

Reckless Love: “...[God’s love] chases me down, fights ‘til I’m found, leaves the ninety-nine...”

Greater: “And greater is the One living inside of me than he who is living in the world”

Next Steps

- More songs
 - Old/new songs
 - Integration (e.g. forScore, PraiseCharts)
- Dynamic inputs
 - Entire sermon outline
 - Passages (e.g. Matthew 5:3-11)
- Seasons



Q & A