

# Why Does That Sound Good?

VISUALIZING THE INVISIBLE JOURNEY OF MUSIC

WHY DOES THAT SOUND GOOD?

# Intro

Do you ever ...

listen to a song over & over  
because you love the way it sounds?

wonder why you like certain combinations of sound?

want to connect to a song visually,  
in a way that translates the sounds you hear?

WHY DOES THAT SOUND GOOD?

My profession is healthcare analytics.

My passion is music, visual communication,  
and breaking down complexity into relatable concepts.

## MEET THE TEAM



STELLA



MARYJO



ROSIE



LEELOO DALLAS

# About Me

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SETTING THE TONE

# Why

WHY DOES THAT SOUND GOOD?



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WHY DOES THAT SOUND GOOD?

# A Tonal Journey

Music theory is complicated!  
... but you don't need it to know  
that music takes you on a journey.

Much like a story, songs create tension and resolution.

MUSICAL MINDS

# Who

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# The Audience



## Melody Moore

Persona Category: Music Enthusiasts

Persona: Beginner Musician

Empower Melody Moore to transform music theory from an intimidating maze into an accessible and visually intuitive journey—making the magic behind every chord and progression clear and inspiring.

### Pain Points

- Overwhelmed by complex music theory
- Looking for innovative ways to better understand music to translate into how they hear and play music

### Typical Characteristics

- Passionate about music and eager to learn
- Visual learner who thrives on intuitive and accessible explanations

### Gains Information From

- YouTube tutorials, online courses, and interactive apps
- Music blogs, forums, and social media groups
- Podcasts and local music meetups

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# Finding the Audience

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This website prototype is designed to be viewed on a laptop or device with a full screen.

Educational websites  
with music theory lessons

Index

< Prev ^ Up Next >

Search

### 7.1 Roman Numeral Chord Symbols

Music is full of patterns that are similar from one with minor scales, we were able to use scale degree different patterns for harmonic, melodic, and natural that there are 15 minor key signatures. Using numbers helps us see these patterns. Thinking of music in terms of progressions from one key to another. Thinking of also helps us to analyze it and to spot similar patterns in pieces in

We will use Roman numerals to represent chords. Uppercase numerals are used for major chords and lowercase numerals are used for minor chords. The "+" sign is used for augmented chords and the "-" sign is used for diminished chords. The "7" is used for dominant 7th chords. The "9" is used for 9th chords. The "11" is used for 11th chords. The "13" is used for 13th chords. The "b" is used for flat and the "n" is used for natural.

NOTE

START HERE

CHORD THEORY

SONG TUTORIALS

THEORY

TECHNIQUE

MUSICIANSHIP

CHORDS & SCALES LIBRARY

Some chord progressions have become mainstays in music. Here are ten popular chord progressions every musician should get familiar with. Click on the progression to jump to more details about it.

Progression	Number System	Chords in C Major
I-V-vi-IV		C-G-Am-F
vi-IV-I-V		Am-F-C-G
i <sup>7</sup> -V <sup>7</sup> -i <sup>7</sup>		Dm7-G7-Cmaj7
I-I-I-I-IV-IV-I-I-V-IV-I-I or V		C-C-C-C-F-F-C-C-G-F-C-C or G
I-vi-IV-V		C-Am-F-G
Minor: I-VII-VI-V		Minor: Am-G-F-E
Major: I-bVII-bVI-V		Major: Cm-Bb-Ab-G
I-bVII-IV		C-Bb-F
I-IV-vi <sup>9</sup> -iii-vi-ii-V-I		C-F-Bdim-Em-Am-Dm-G-C
I-V-vi-iii-IV-I-IV-V		C-G-Am-Em-F-C-F-G

### Chord Progression Cheat Sheet

Quickly put together a verse or entire song with this 2-page printable cheat sheet for common chord progressions. Includes popular major and minor key chord progressions for rock, blues, jazz, and pop genres. Master the popular 12-bar blues, 1-4-5, 2-5-1, and more!

#### Chord Progressions in Major Keys

Triads in Major Keys

Triad	Notes	Chord
I	C-E-G	C
ii	D-F-A	Dm
iii	E-G-B	Dm
IV	F-A-C	F
V	G-B-D	G
vi	A-C-E	Am
VII	B-D-F	Bm

Seventh Chords in Major Keys

Seventh	Notes	Chord
I	C-E-G-B	C
ii	D-F-A-C	Dm
iii	E-G-B-D	Dm
IV	F-A-C-E	F
V	G-B-D-F	G
vi	A-C-E-G	Am
VII	B-D-F-A	Bm

Common Chord Progressions in Major Keys

Progression	Notes	Chord
I-V-vi-IV	C-E-G-B-A-C-E-G	C-G-Am-F
vi-IV-I-V	A-C-E-G-F-A-C-E	Am-F-C-G
i <sup>7</sup> -V <sup>7</sup> -i <sup>7</sup>	D-F-A-C-G-B-D-F	Dm7-G7-Cmaj7
I-I-I-I-IV-IV-I-I-V-IV-I-I	C-C-C-C-F-F-C-C-G-F-C-C	C-C-C-C-F-F-C-C-G-F-C-C or G
I-vi-IV-V	C-A-G-B-A-C-E-G	C-Am-F-G
Minor: I-VII-VI-V	A-B-D-F-A-G-B-D	Minor: Am-G-F-E
Major: I-bVII-bVI-V	B-A-F-G-B-A-F-G	Major: Cm-Bb-Ab-G
I-bVII-IV	B-A-F-G-B-A-F-G	C-Bb-F
I-IV-vi <sup>9</sup> -iii-vi-ii-V-I	C-F-B-D-A-G-E-A-C-F	C-F-Bdim-Em-Am-Dm-G-C
I-V-vi-iii-IV-I-IV-V	C-G-A-E-F-C-F-G	C-G-Am-Em-F-C-F-G

Music resource websites  
with chord mappings

Beautiful Things Chords

< Share

Heart

Menu

More

by Benson Boone

Diagrams

Overview

Edit

3, 2, 1..

Volume

Loop

100%

70 BPM

Capo

Transpose

Sections

Simplify

E <sup>b</sup>	B <sup>b</sup>	F		E <sup>b</sup>	B <sup>b</sup>	F	Gm
E <sup>b</sup>	B <sup>b</sup>	F		E <sup>b</sup>	B <sup>b</sup>	F	Gm
E <sup>b</sup>	B <sup>b</sup>	F		E <sup>b</sup>	B <sup>b</sup>	F	G <sup>dr</sup> Gm
E <sup>b</sup>	B <sup>b</sup>	F		E <sup>b</sup>	B <sup>b</sup>	Gm	F E <sup>b</sup>
	Cm		F <sup>7</sup>			E <sup>b</sup>	B <sup>b</sup>
F	Gm	E <sup>b</sup>	B <sup>b</sup>	F	Gm	E <sup>b</sup>	B <sup>b</sup>
F		E <sup>b</sup>	B <sup>b</sup>	Gm	F	E <sup>b</sup>	B <sup>b</sup>
Gm	F	E <sup>b</sup>	B <sup>b</sup>	Gm	F	E <sup>b</sup>	B <sup>b</sup>

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HARMONIZING THE DATA

# How

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# Music is Full of Data

## Reference Data

- Keys & Chords
- Harmonic Function
- Sharps & Flats

## Activity Data

- Song data derived from original sheet music
  - Classical:
    - Beethoven Piano Sonata
  - Romantic:
    - Chopin Nocturne
  - Rock:
    - Queen, Bohemian Rhapsody
  - Pop:
    - Chappell Roan, Pink Pony Club
    - Benson Boone, Beautiful Things

# Music is Full of Data

## Reference Data

Keys and Chords						
Key	Mode	Relative Ch	Chord Type	Named Chc	Named Chc	Named Chc
Bb Major	Major	bIII	Triad	Db Major	Dbmaj	Major
Bb Major	harmonic function		Triad	Gb Major	Gbmaj	Major
Bb Major	Mode	Relative Chord	Function	ch 6th	Fr6	augmented
Bb Major	Major	#Vdim7	Dominant	an 6th	G6	augmented
Bb Major	Major	sharps and flats		uminant	Bbmaj	Major
Bb Major	minor	Key	Mode	Sharps	Flats	minor
Bb Major	Major	A Major	Major	3	0	Major
Bb Major	Major	a minor	minor	0	0	Major
Bb Major	Major	A# Major	Major	2	0	minor
Bb Major	Major	a# minor	minor	5	0	minor
Bb Major	Major	Ab Major	Major	0	4	Major
Bb Major	Major	ab minor	minor	0	5	minor
Bb Major	Major	B Major	Major	5	0	minor
		b minor	minor	2	0	
		Bb Major	Major	0	2	
		bb minor	minor	0	5	
		C Major	Major	0	0	

## Activity Data

song data															
Song Title		Artist / Composer		Year	Genre	Key	Section								
Sonata No. 21 in C major Op. 53 "Waldstein", I		Ludwig van Beethoven		1804	Classical	C Major	Exposition Theme 1								
Sonata															
C Major															
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# Copyright & Use of Music Data

Legal Area	Applies to Project?	Mitigations
Copyright Law	✓ Yes	Project is educational in nature and falls under the education exception, only include minimum data needed and do not reproduce full copyright-protected material
Digital Millennium Copyright Act (DMCA)	✓ Yes	Watch out for takedown requests if public
Derivative Works	✓ Yes	Ensure transformations are minimal or educational, use original MIDI sound bytes
Publicity Rights	⚠ Maybe	Do not use artist likeness or name prominently
Performance & Sync Rights	⚠ Maybe	Do not use full copyright-protected recordings in videos

## Designing for simplicity & accessibility

1. iconography
2. thematic colors
3. audio integration



# Bringing Color to Music

ORCHESTRATING THE STORY

# What

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THE INSPIRATION PLAYLIST

# What's Next

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# Looking Ahead

- Transition from Figma to full website
- Explore other options for audio-visual data viz tools
- Curate a backlog of song data
  - All 32 Beethoven Piano Sonatas
  - User interest in specific songs and artists
- Create user-requested features, like **printable versions** and **common chord progressions maps**



STANDINGOVATION

# Acknowledgements

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# Applause Please

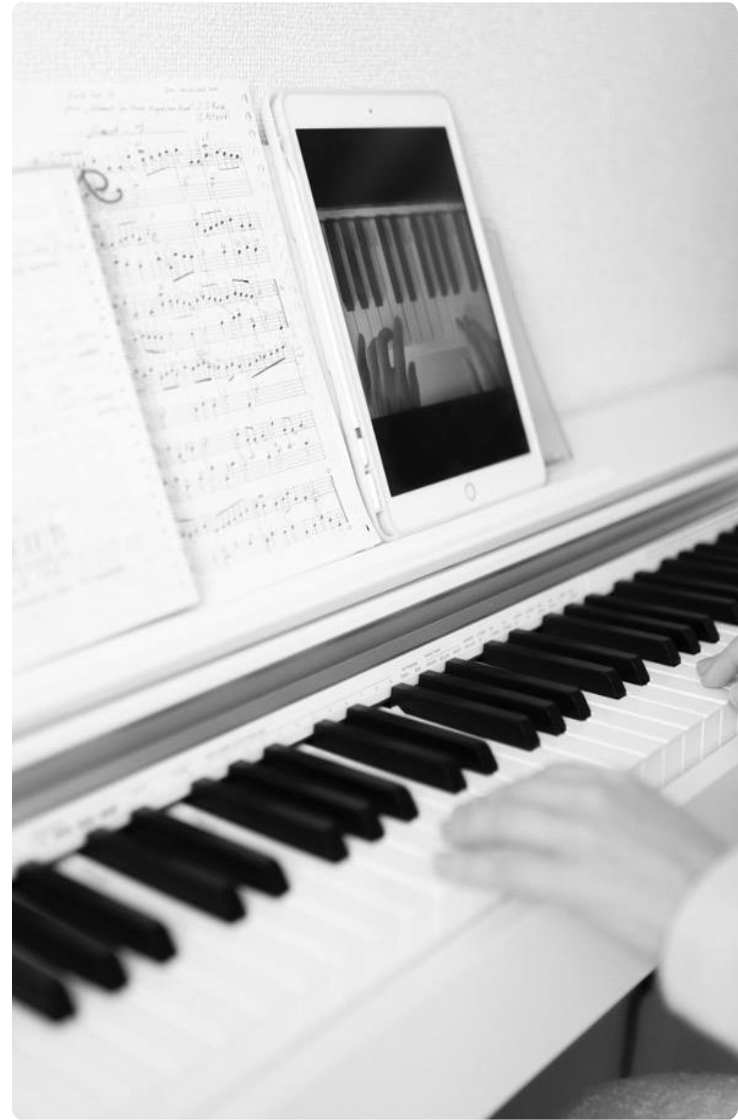
- Ryan Abshier, music theory expert and piano teacher
- My user testing group
- My family
- My cohort
- Amy, Jes, Rosie & the MICA faculty



ENDING ON A GOOD NOTE

# Q&A

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