# Music Education at the Crossroads: The Impact of AI & Technology

### FFBISIA

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#### **Dr. Jim Frankel** Founder/Director www.musicfirst.com

Blog: www.jamesfrankel.com Podcast: soundcloud.com/musicfirstpodcast

# A quick commercial...

		Welcome Jim Frankel		
		My Classes		
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	>	Auralia & Musition First (Introductory)	Drum Channel Level 100	Habits o Musiciai
<u>*••</u>	>			
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Habits of a Successful Beginner Band

Musician Lesson Plans

Image: Gradebook

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Discussions

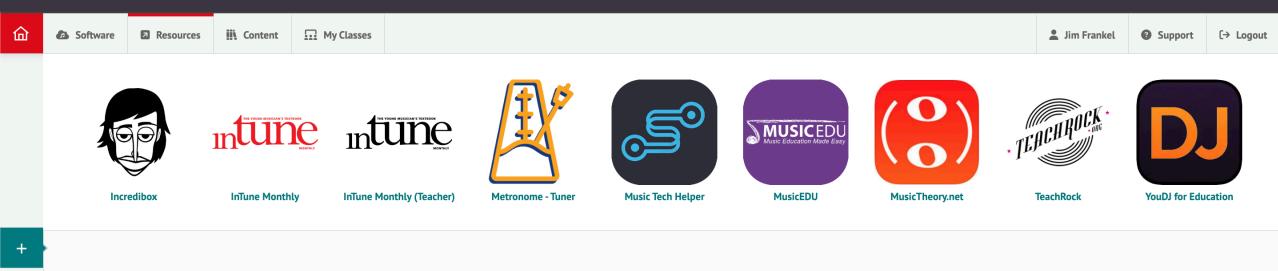
+ Create a Class

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Resources

Discussions

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\$	Copyrigh	t © 2024 GIA Pi	ublications, Inc.;	; all rights reserv	red.					🗄 🌰 Microphone Quiz	٢	Task
				_						It Music Symbols Quiz 10 Questions	Assessm	ient
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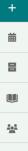
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#### **MusicFirst Library**

The MusicFirst Library offers a broad range of courses, units, lessons, and assessments carefully curated by a team of expert music educators. These materials are ready for immediate use in your classroom, and can also be customized to suit your curriculum.

#### Explore the Library:



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Band



>



**Music Theory** 



#### **General Music**



Modern Band

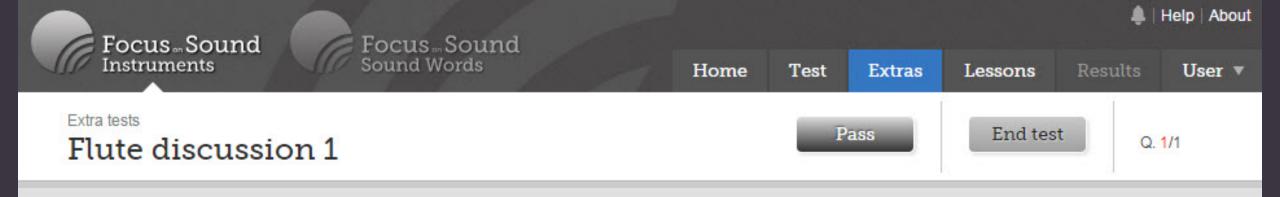
Orchestra

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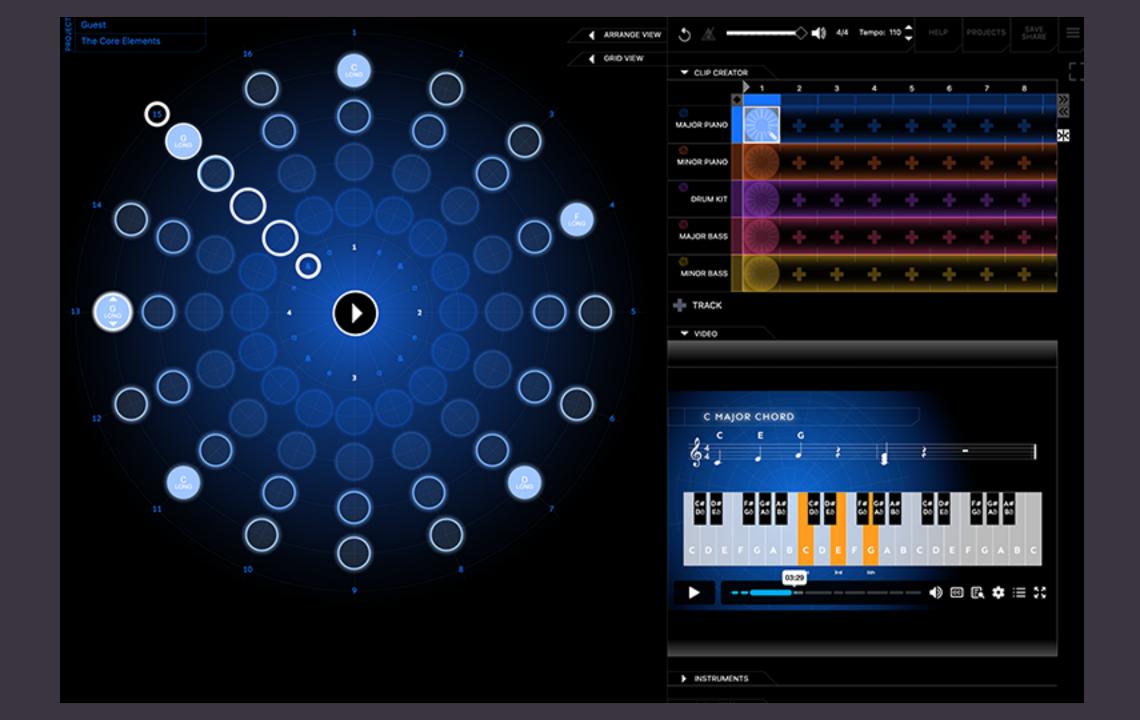
Compare these two recordings of a flute. You can either discuss it in class or type short descriptions (or both). You can mention the types of music, as well as the other instruments playing. You might want to use words and terms like virtuoso, broken chords, long notes, trill, swing, etc.

### Audio clip 1 Audio clip 2

The first recording seems to be of jazz music. The player is improvising but keeps repeating notes. I can hear a rhythm section in the background.

The second recording is of some kind of classical music. The flute player is unaccompanied to start with. It is very difficult, virtuosic music.

Save answer



# When it comes to Al, what are you excited about?

### What are you nervous about?

### A BIG AI Announcement...







Woodwinds	Brass	Strings	O Contraction Contraction
Upload Music	Upload Music	Upload Music	Upload Music
Play Music	Play Music	Play Music	Play Music
Audition	Audition	Audition	Audition

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# Play Gloves



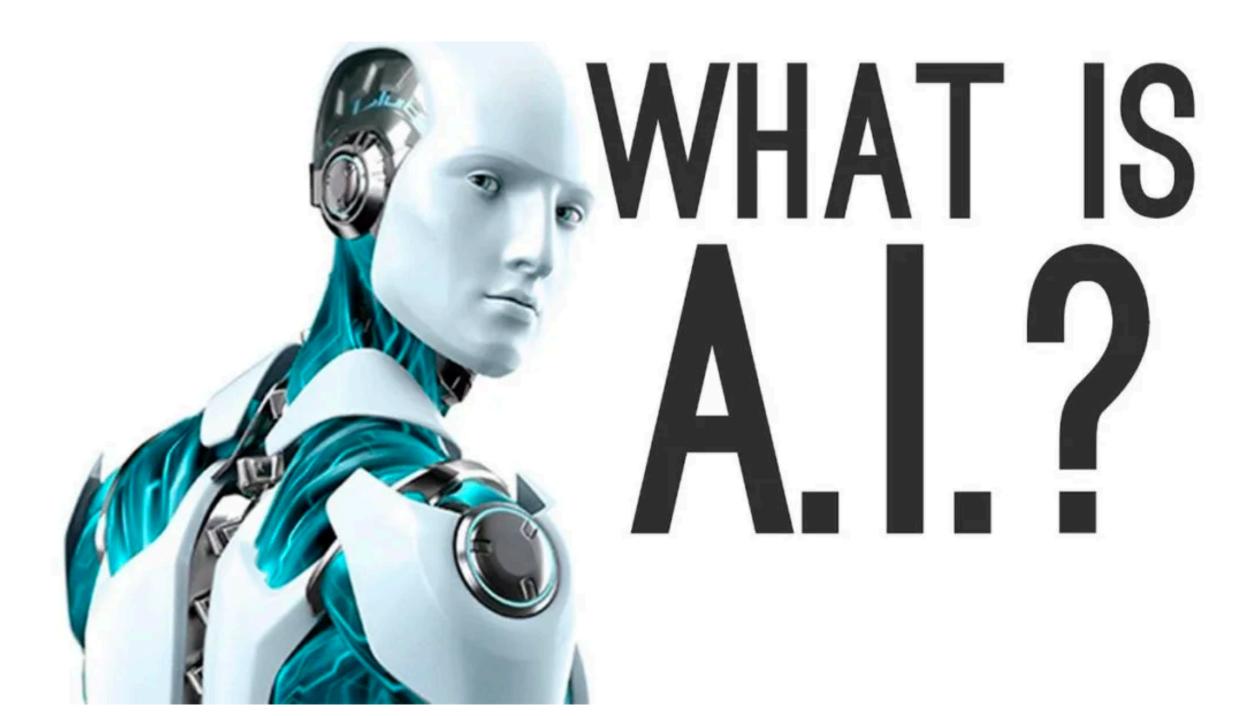
# Play Baton

# Play Face



# But seriously...

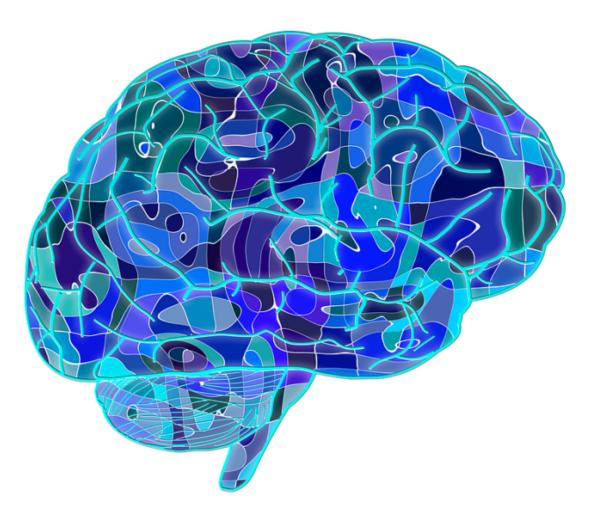
### As music teachers, you MUST help guide the future of Al use in your classroom.

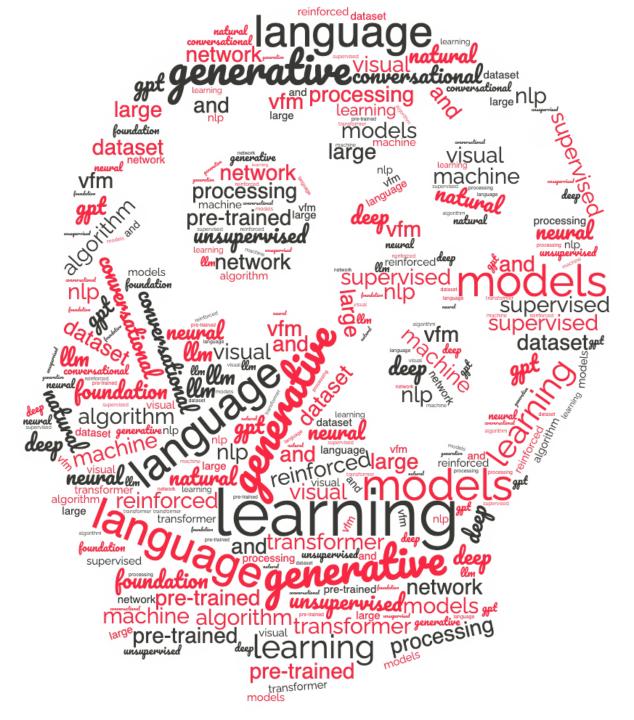


- Artificial Intelligence
  - •Alan Turing Oxford
  - •Arthur Samuel MIT/Stanford
  - •John McCarthy Stanford
  - •Marvin Minsky MIT

•It's been around since the **1950**'s

•Companies like Amazon, Facebook & Google have been using it for YEARS





### **Common Al Terms**

GPT - Generative Pre-trained Transformer

LLM - Large Language Models

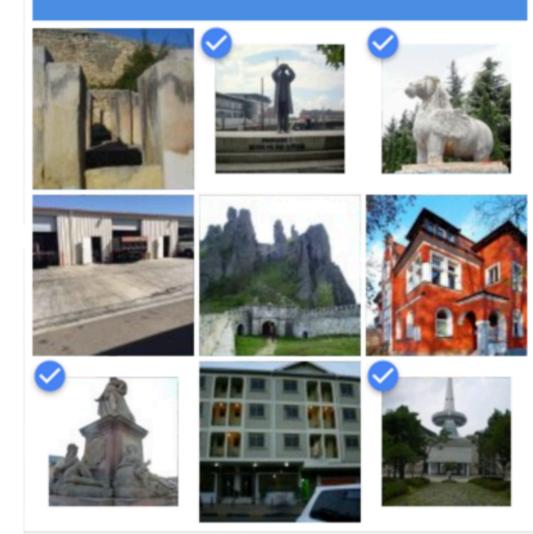
NLP - Natural Language Processing

ML - Machine Learning

Deep learning

VFM - Visual Foundation Models

#### Select all images with statues.

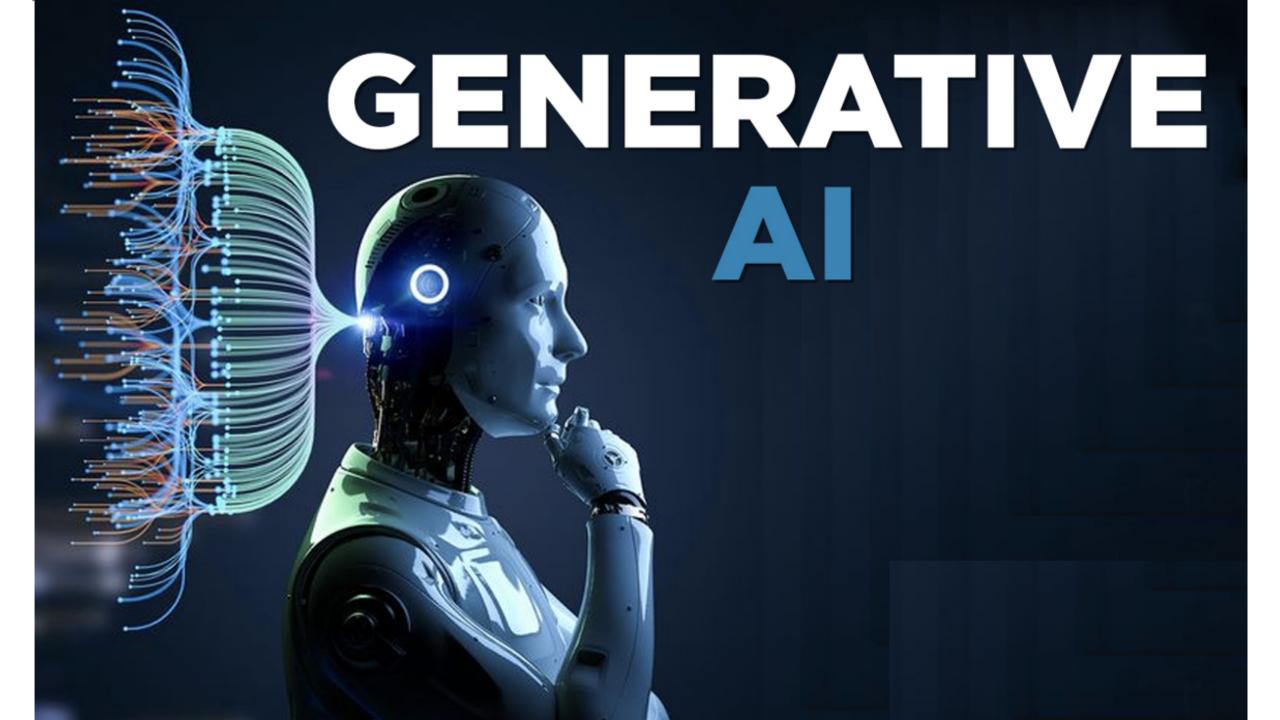


### We've been training Al all along...

#### 0 0 0

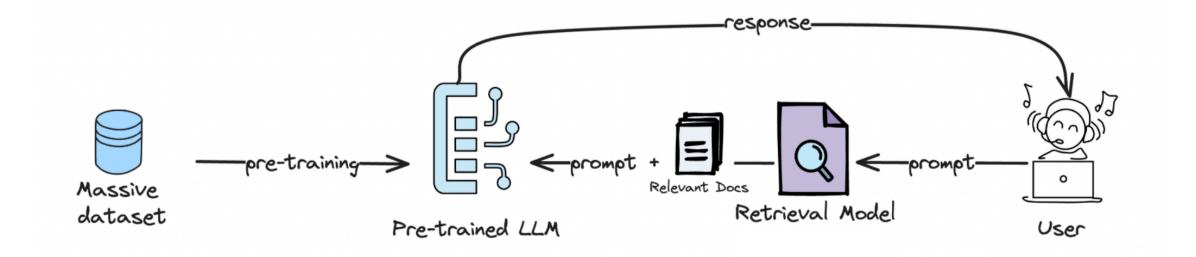


### Al is all around us. ChatGPT made us realize it.

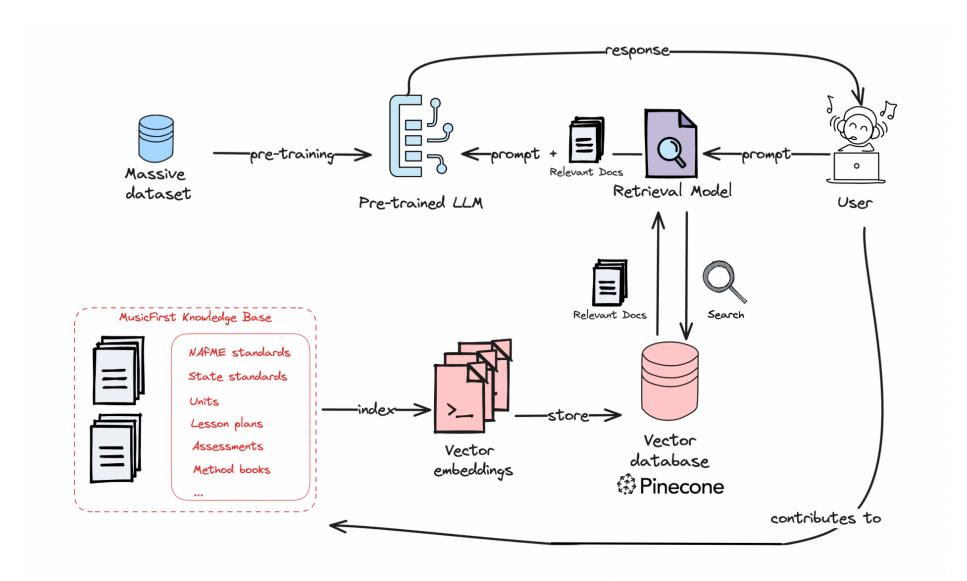


# It's all about DATA

### How does Generative AI actually work?



### What is RAG - Retrieval Augmented Generation?



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C

Today

AI Music Practice Image

Previous 7 Days

AI Tools for Musicians

JEN AI Music Platform

Previous 30 Days

Laurie McDermott Recommendati

Modern Slavery Statement Rewrite

Persuade to Read Book

Visual Model of Melody

June

Braces Advice for Trumpet

Create visual fingering chart.

Resources for Make Music

Al Music Copyright Image

++ Renew Plus



QStuActivities to makeStufriends in new cityStu

Message ChatGPT

Study vocabulary

Text inviting friend to wedding

=0

Python script for

daily email reports

ChatGPT can make mistakes. Check important info.

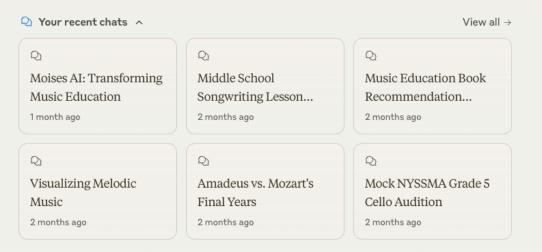
#### Claude

JF

Using limited free plan Upgrade

#### ₩ Good afternoon, Jim

Please listen to my performance of London Bridge Is Falling Down and provide me with detailed feedback on my performance as well as some suggestions on how I can improve.						
Claude 3.5 Sonnet	Use shift + return for new line					
Collaborate with Claude using documents, images, and more	Add content					



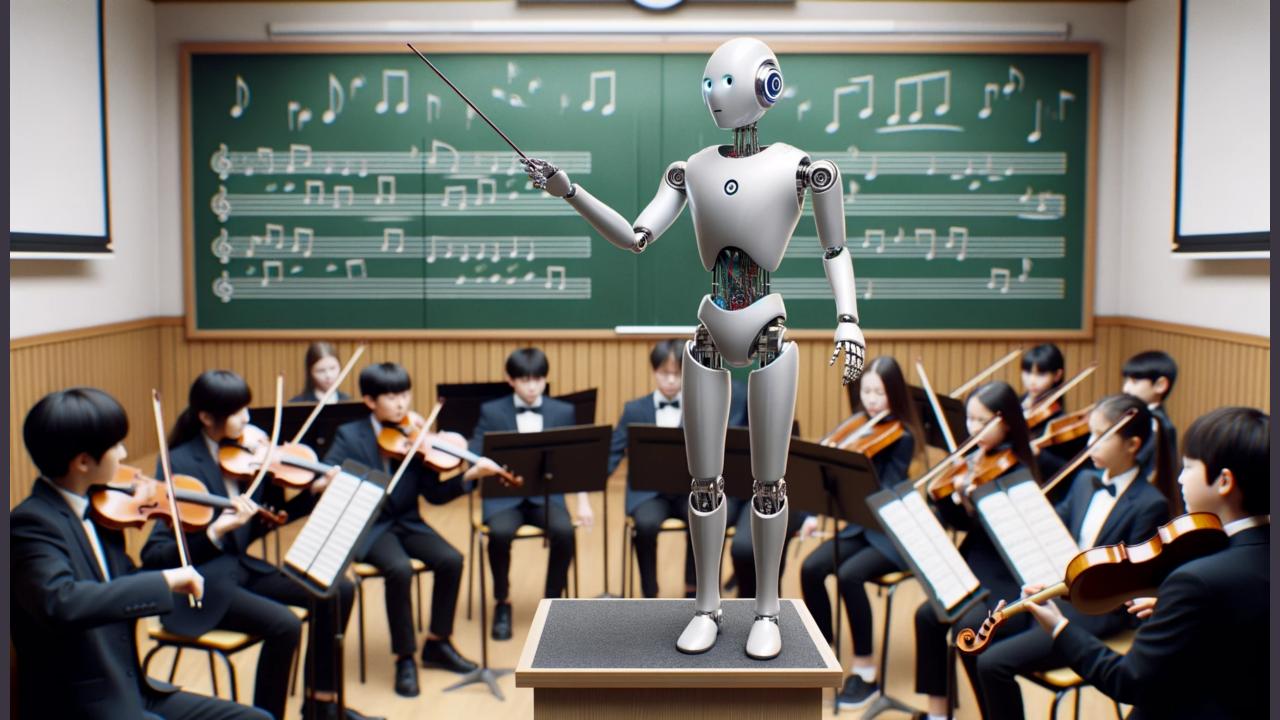




All videos in this video were generated directly by Sora without modification.







#### 😸 Best Homework Al Tutor Ever

Snap the question, get answers and step-by-step explanations instantly.

• • •		
	Ask Al	o x
g(x)=ax <sup>2</sup> +24 For the function g defined above, a is a constant and g(4)=8. What is the value of g(-4)? A) 8 B) 0 C) -1	<ul> <li>Hi, how can I help you?</li> <li>g(x)-ax<sup>2</sup>+24 For the function g defined above, a is a constant and g(4)-8. What is the value of g(-4)</li> <li>We can find the value of a by using the given information that g(4) = 8 Substituting x = 4 into the function g(x) gives us the equation: g(4) = a • 6<sup>2</sup> + 24 = 8 Solving for 6 , we get a • 16 + 24 = 8</li> </ul>	Ask Al Ask Al Flashcards Read 2
D) -8 3x+4y=-23 2y-x=-19 What is the solution (x,y) to the system of equations above? A) (-5,-2) B) (7, 8) A (-5,-2) C)	$c + 2e = 0$ $c + 16 = -16$ $a = -1$ Now that we have found the value of a, we can use it to find $g(-4)$ Substituting $x = -4$ into the function $g(x)$ gives us: $g(-4) = (-1) \cdot (-4)^2 + 24 = -16 + 24 = 8$ Therefore, the value of $g(-4)$ is 8. $f(-4) = (-1) \cdot (-4)^2 + 24 = -16 + 24 = 8$ Therefore, the value of $g(-4)$ is 8. $f(-4) = (-1) \cdot (-4)^2 + 24 = -16 + 24 = 8$ Therefore, the value of $g(-4)$ is 8. $f(-4) = (-1) \cdot (-4)^2 + 24 = -16 + 24 = 8$ Therefore, the value of $g(-4)$ is 8.	Write
B) (3,-8) C) (4,-6)	Write your message	் ம் இ

# Al in Music Software

# There are hundreds of AI music apps with more launching daily. Here are a few.

ଢ	American Jazz	≡	🗣 Music Fi
			Lesson
	Create a Lesson Plan		Create a Lesson About
	1) Lesson Basics		
	Lesson Title Jazz History		Lesson Plan Title: Ja Grade Level: Middle
0	Select Class Add to Favorites Only ~		Objective:
<b>m</b>	Unit None Selected V		Students will under of Jazz music, includ significance.
			Materials:
	1) Teacher View Only		Jazz music recording Computers or tablet Whiteboard and ma
	Objectives Styles → B I 1 = := 99 = ABC→ 55 ⊙ Source		Jazz history resource Musical instruments Introduction (10 mir
*	Students will understand the origins and development of Jazz music, including its cultural		The teacher will be music, and ask stud
쓭	and social significance.		what they hear. The they have heard Jazz idea of what Jazz m
٥			the topic of Jazz his uniquely American by people all over th
			Body (45 minutes):
			Origins of Jazz The teacher will int American musical tr originated from the traditions including harmony. The teach Jazz musicians such
	Materials Styles $\cdot$ <b>B I</b> $\downarrow \equiv$ $:=$ <b>??</b> $\blacksquare$ $\triangleq$ $ABC \cdot$ <b>5 Source</b>		and Louis Armstron Jazz in the 1920s
	Jazz music recordings (various styles and periods) Computers or tablets with internet access Whiteboard and markers		The teacher will exp during the 1920s, kr will discuss the eme Duke Ellington, Bes
	Jazz history resources (books, articles, websites) Musical instruments (optional)		<u>Regenerate</u>

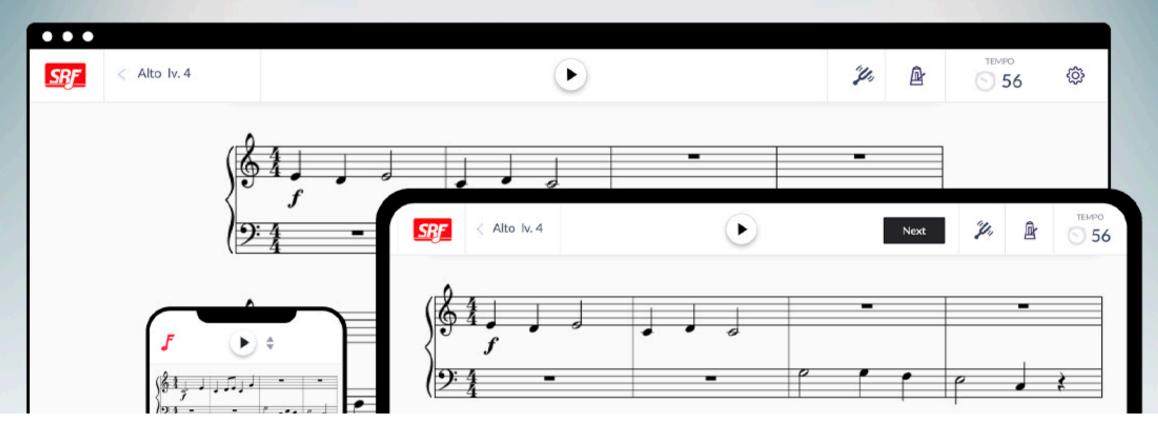
#### <sup>7</sup>irst Assistant X Task Assessment chool level lesson plan on jazz history 1 : Jazz History le School (6-8) erstand the origins and development uding its cultural and social ngs (various styles and periods) lets with internet access narkers rces (books, articles, websites) nts (optional) ninutes): begin by playing a short piece of Jazz idents to listen carefully and describe ne teacher will then ask the class if azz music before, and if they have any music is. The teacher will introduce istory, and explain that Jazz is a n music form that has been enjoyed the world. ntroduce the concept of Africantraditions, and explain how Jazz e blending of various musical ng African rhythms and European cher will provide examples of early ch as Buddy Bolden, Jelly Roll Morton, ng. xplain how Jazz became popular known as the "Jazz Age." The teacher mergence of Jazz musicians such as essie Smith, and Count Basie, and how

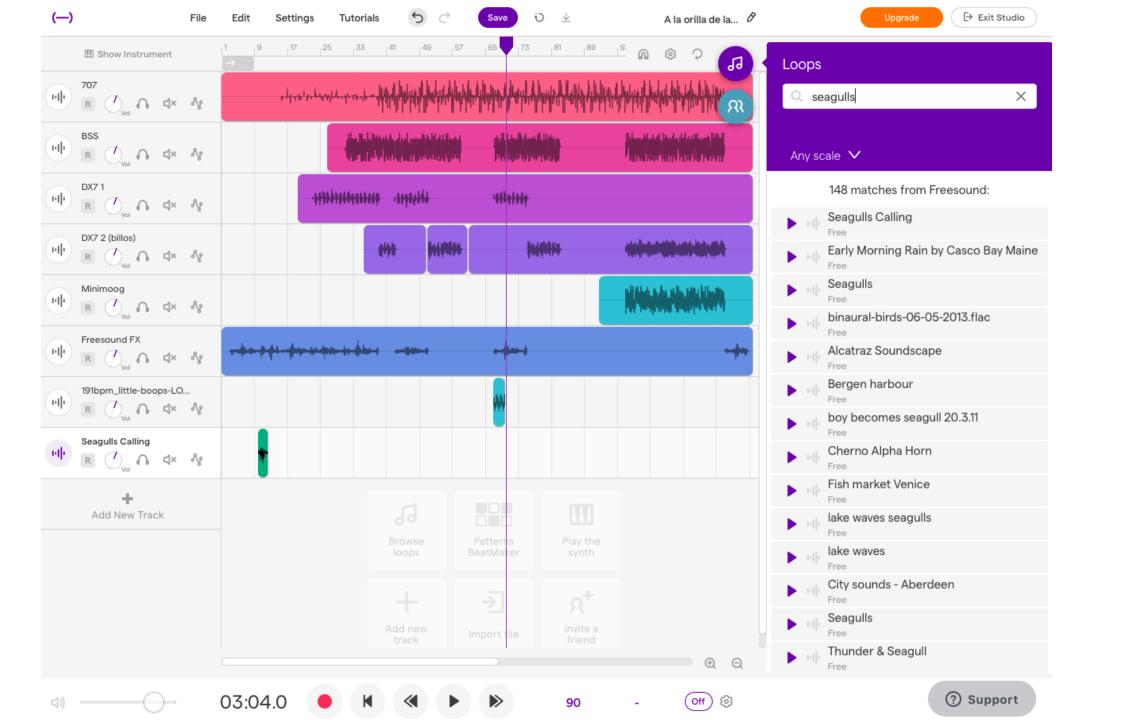
Use Lesson Plan

#### ChatGPT integration into the MusicFirst Classroom

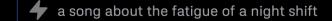












Make your music



Discover

My Creations

C Liked Songs

PLAYLISTS

By you By others

#### Staff Picks

Learn how to create



Metropolis Pt. 3 charlie 9282 ♥ 112



Cosmic Canine Cruise Staff ▶ 19305 ♥ 277



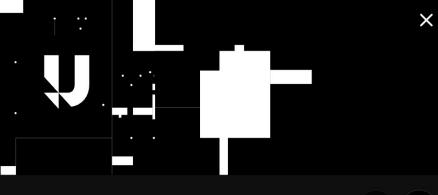
Rising Sun Gospel charlie ▶ 24477 ♥ 252



Crater Lullaby Tie blue ▶ 19112 ♥ 101



Chill of Night Staff ▶ 8206 ♥ 29 Wow. Bobbį ▶ 73!





#### **SUNO**



4:02

▶ 672K

Electronic, sweet female ...

AroundOnce

MAYBE?!

The Summer of Suno Vol. 2 is live! Submit a video sharing a story behind a song to win. Learn more.

Summer of Suno, Vol. 1

Home

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- Library
- Explore
- Search





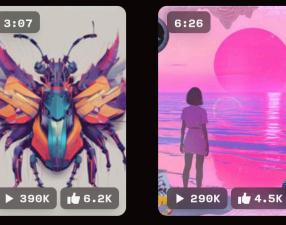
Help About

Careers

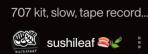


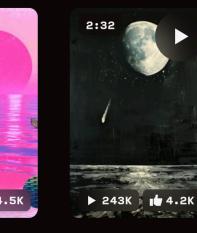
#### Suno Showcase

8.6K



Suno Please Fix electro-swing-step, step ... SirBitesAlot





Where Do We Go Fro... Freefall Slow otherworldly waves...





#### Eye of the Storm...

Electric Violin, Modern Vi...

Feline Music...

Go to Playlist 🔶

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Show more +

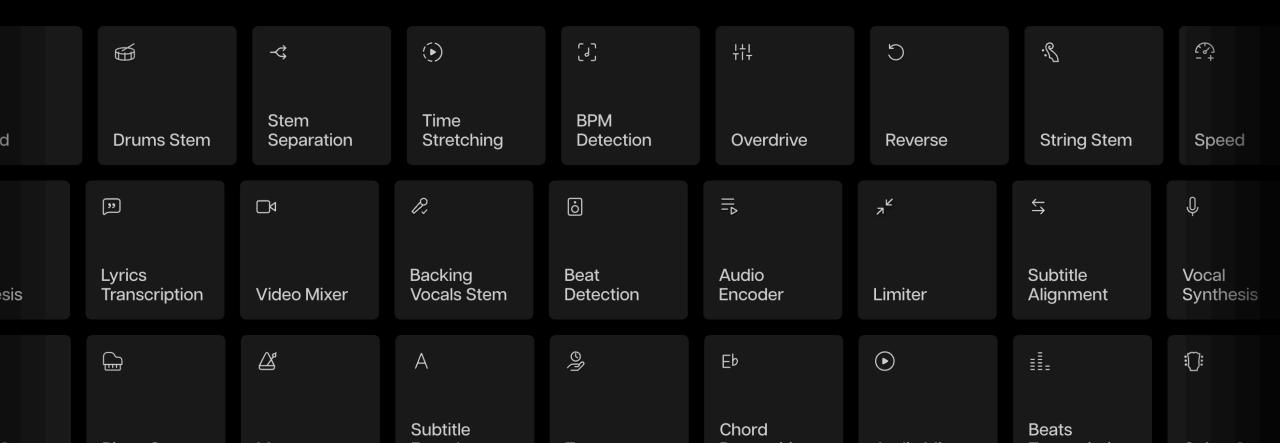


Contact

#### The one-stop-shop for all your Al needs

#### Largest collection of state-of-the-art Al modules.

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**₽**→ Remover

 $\Delta$ 

**V** Pitcher

Key BPM

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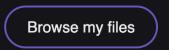
Q. Recorder

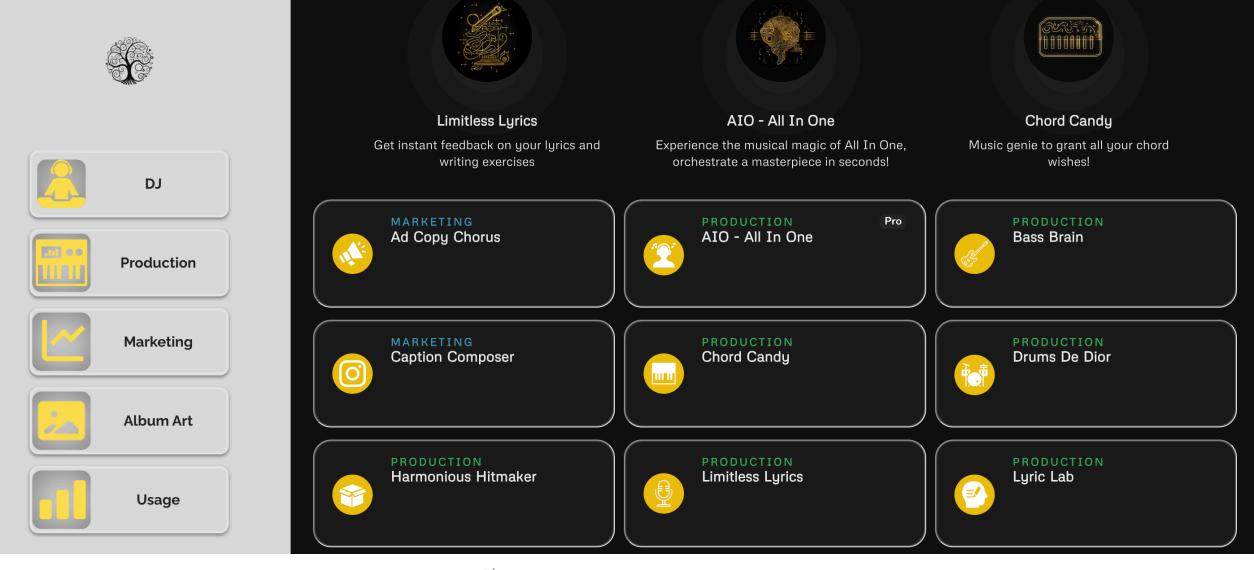
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#### **Vocal Remover and Isolation**

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Empress.ac

### AIVA

The Artificial Intelligence who composes classical music







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Sign up free

👫 Text to image

Choose the image of "A panda riding a bike through the city with depth of field" you'd like to use.



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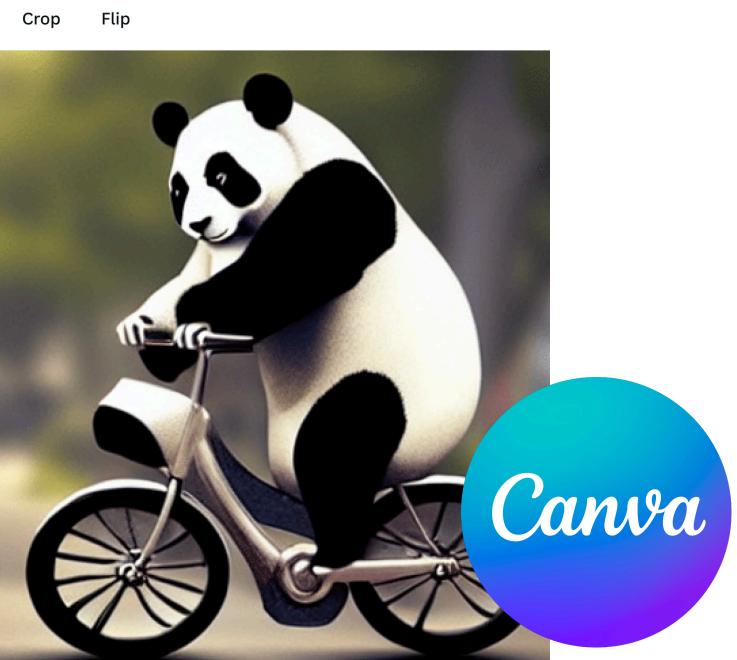


Text to image



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### Implications for Music Education

### **Personalized Music Learning**

## Authentic Assessment

### **Computer - Human Interaction**

# **Detailed Data Analysis**

### **Music Composition**

# **Music Listening**

### **Questions?**

#### Thank you!

#### jim@musicfirst.com

www.musicfirst.com

www.jamesfrankel.com



soundcloud.com/musicfirstpodcast