




The Use of AI in Creating Music Compositions: A Case Study on Suno Application

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Abstract. Nowadays, technological developments are very massive, and one of the most revolutionary software is the emergence of Artificial Intelligence (AI). Currently, AI is widely used by humans to make some of their matters easier so that their goals can be achieved quickly. In this context, AI has also penetrated the world of art, including music. Recently, AI has been blessed with the intelligence to quickly create musical compositions. One of the AIs that is well-known in the world of music is Suno. Nowadays, people can create musical compositions quickly and easily using the Suno application. People nowadays do not need to bother learning the science of musical composition to create musical compositions. Even the musical composition created by AI is quite good. This research will find out in more depth the advantages and disadvantages of creating compositions using AI. This research used a qualitative approach and an unobtrusive content analysis method. The theory used in this research is performing arts management.

Keywords: Modern performing arts, music composition, Suno AI

1 Introduction

According to John McCarthy, who is known as the father of Artificial Intelligence, AI is defined as the science and engineering of creating intelligent machines, particularly intelligent computer programs (2007). It involves developing systems such as computers, computer-controlled robots, or software that can think intelligently, like how humans think (McCarthy, 2007).

Recently, the issue of AI has been massively developing in the wider community. The development of AI has now helped humans in various ways, namely in the fields of health, finance, transportation, manufacturing, education, e-commerce, agriculture, cyber security etc. AI is achieved by analyzing how the human brain functions, how people learn, make decisions, and solve problems. The insights gained from studying these human cognitive processes are then used to develop intelligent software and systems.

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In this context, AI has also penetrated the world of art, including music. Recently, AI has been blessed with the intelligence to quickly create musical compositions. One of the AIs that is well-known in the world of music is Suno. Suno AI is a technology that provides AI-powered tools for generating high-quality audio, including text-to-speech (TTS) and music generation. The platform enables users to create realistic and expressive audio by leveraging advanced machine learning models. Suno AI is particularly known for its ability to generate natural-sounding voices and music compositions, which can be used in various applications such as voiceovers, audiobooks, podcasts, and more. The platform likely incorporates state-of-the-art AI techniques to synthesize speech and music in a way that mimics human-like expression, making it useful for creative professionals, content creators, and developers who need high-quality audio content. Suno AI represents a part of the growing trend of AI tools designed to assist or augment creative processes, providing users with new ways to generate and manipulate audio content.

Nowadays, people can create musical compositions quickly and easily using the Suno application. People nowadays do not need to bother learning the science of musical composition to create musical compositions. Even the musical composition created by AI is quite good. This research finds out in more depth the advantages and disadvantages of creating compositions using AI.

2 Research Question

1. What is music composition?
2. What are the differences between conventional and AI music composition?
3. How are the SWOT analysis on the processes of conventional and AI music composition?

3 Objectives of the Study

1. To explain music composition.
2. To reveal the differences between conventional and AI music composition.
3. To find out about the SWOT analysis on the process of conventional and AI music composition.

4 Review of Literature

Music composition is the process of creating a new piece of music. This involves crafting melodies, harmonies, rhythms, and arranging these elements into a cohesive structure. Composers typically start with an idea or theme and develop it into a complete musical work whether it's a song, symphony, soundtrack, or any other form of music.

The first book about *Musical Form and Analysis* was written by David Cameron. He informs that music is made up primarily of notes, chords, melodies, and thematic structures. But music can also be seen as a drama in which tonal processes challenge

each other, develop, re-emerge, and ultimately return to their original key. The performer who can see auditory or visual structures interacting in this way has something more than just beautiful sounds to share with his audience. He can offer them an experience full of form, meaning, and life, an artistic experience worthy of comparison with great drama or a highly expressive painting. The great imaginations of great composers may amaze us; but learning to trace their thoughts is also a source of pleasure and satisfaction (David, 2015).

The second book is *Structure and Style: The Study of Musical Form*, written by Leon Stein. This book explains that creating a musical composition generally requires knowledge of musical forms from various eras; Renaissance, Baroque, Rococo, Classicism, Romanticism, Twentieth Century (Modern) (Stein, 1962). By understanding song structures, we can compose songs more easily. Musical form refers to the structure or organization of a piece of music. It describes how a composition is divided into sections, how those sections are arranged, and how they relate to one another. Musical form provides a framework that helps listeners and performers understand the overall shape and development of a piece.

The modern structure of music has evolved significantly, but it often draws from traditional forms while adapting to contemporary trends, genres, and innovations in technology. Depending on the genre—pop, rock, electronic, hip-hop, indie, classical fusion, etc.—the structure can vary.

The last book is from Achsan Permas, *Manajemen Organisasi Seni Pertunjukan*, which is used to find out the Strength (S), Weakness (W), Opportunity (O) and Threats (T), of each method in creating music composition, conventional and using Suno AI applications (Permas, Hasibuan-Sedyono, Pranoto, & Saputro, 2003)

5 Method

5.1 Research Design

This research uses a qualitative approach and content analysis methods. Qualitative research generally utilizes inductive methods to develop knowledge, aiming to build understanding or meaning (Leavy, 2017). Aligned with the qualitative approach, content analysis is a method that allows researchers to examine the deeper meanings within different forms of text and materials, including visual, audio, and audio-visual data (Leavy, 2017).

5.2 Method of Data Collection

5.2.1 Source

Content Analysis: video content regarding the steps in creating a musical composition are examined. The first video is Indra Aziz talking about making songs using conventional methods. The second video is a video made by Eka Gustiwana's video discussions about experience making songs using Suno AI application.

5.2.2 Procedure

Through content analysis, this study conveys a comparison between conventional music composition and AI music composition. Below are steps of procedure in this research.

1. First, the researcher watched the YouTube video from Indra Aziz talking about making songs using conventional methods. The second researcher watched the YouTube video from Eka Gustiwana's video.
2. Second, the researcher observed and analyzed the steps of conventional music composition and AI music composition video.
3. After the collection of all data analysis, the researcher reduced important data and wrote data into the correct order.
4. Last, the data lead to the conclusion of this study.

5.3 Method of Data Analysis

In this study, the four-step interactive analysis approach introduced by Miles and Huberman in 2020 was employed. Initially, data was collected through a review of literature and discussions with relevant individuals. The second step involved condensing the information to its core elements. The third step entailed sharing both written and visual components of the presentation. Lastly, the data was analyzed to draw conclusions. This method facilitated a comprehensive and systematic examination to address the research questions (Miles & Huberman, 1992).

6 Results and Discussions

This research analyzes the different steps of the two music composition processes, conventional music composition and Suno AI music composition. Furthermore, this research tries to find the strengths, weaknesses, opportunities and threats of each method of composing conventional music and composing songs with Suno AI

6.1 Conventional Music Composition

Composing music is a creative process that involves several steps, from generating ideas to shaping them into a structured piece. In making music we must have capability in musicology. Composing music using conventional methods can take days. The following are the steps in making music composition using conventional methods.

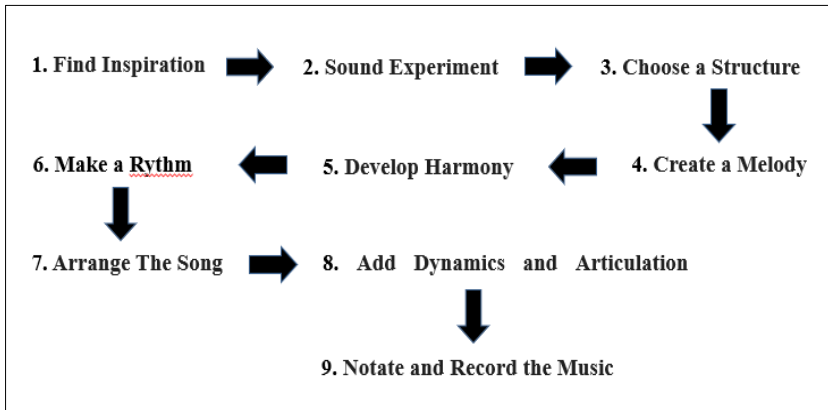


Fig. 1. Steps in making music compositions using conventional methods

6.1.1 Find Inspiration

Inspiration can come from emotions, a specific theme, nature, personal experiences, or even other pieces of music. Some themes are drawn from our own experiences, like in the song “Perfect” by Simple Plan that expresses about a boy who is afraid of not being good enough for his father, so he pushes even more to make it work out even if this path is not exactly what everyone else wishes. Themes like this typically come out of the songwriter hyperventilating in some instance. Romeo Juliet from Taylor Swift, for example is a storytelling of two soul mate teens just like Romeo and Julia would die to keep their love. Song ideas for the themes are either found in experiences or things seen happening around. Thus, a musician buying other songs or seeking outside assistance in songwriting is not an uncommon practice.

6.1.2 Sound Experiment

When it comes to sound experiments, various musicians work on experimenting with the sound or tone. Sound experiments, traditionally done by one musician, are personal. The last chorus is unstoppable even by other musicians. These are sonic experiments that can be used to augment the instrumentation played on bass and guitar. You can even find natural sounds like wind, chickens and the city. You may also find sound experiments from traditional instruments worldwide. Most countries, especially in Asia, have special scales for traditional musical instruments. So, a scale like these becomes an audio experiment for the music producer to include in his song. And software technology such as DAW (Digital Audio Workstation) like FL Studio, Ableton, Cubase or Logic Pro can help get that creative juice flowing too. Sound loops, arpeggiators and modulation effects can also add new dimensions to musical compositions. Play around with melodies, chords, rhythms, musical instruments or scales to see what resonates with someone.

6.1.3 Choose a Structure

When deciding structure for a song, usually we make a song based on our references (song or book). We first listen to the song reference we have chosen, then analyze each part in the song, which includes intro, verse, chorus, bridge, outro and so on. In a song, the intro is the opening part of a song, and usually in pop songs it is filled with melody from musical instruments.

After the intro, the song usually goes into the verse section, and in pop music there are usually lyrics in it. Verse is a form of song section that develops the story, theme or emotion of the song. Usually, the verse conveys a narrative or deeper details that lead the listener to the main theme of the song. The characteristics of the verse in songs are generally smoother, simpler and quieter than the *chorus* or refrain. The melody used is also simpler than the chorus. The second verse in pop songs is usually slightly varied from the first and directs the listener more towards the *chorus*.

The chorus of a song is the most prominent part of the song and is usually repeated and easily remembered by listeners. Usually in songs with lyrics, this part is where the main message or strongest feeling is conveyed. In the use of melody in the chorus, usually in the form of high notes or chord progressions that are more prominent to create an emotional impression or hit.

After the chorus or in the middle of the song, there is usually an interlude section in pop songs. The interlude serves as a transition between the main parts, such as between verse, chorus, or bridge. Unlike verse or chorus which usually contain lyrics, interlude generally focuses on instruments and melodies without lyrics. Composers in this section can explore more creative melodies and harmonies, and without being tied to the lyrical structure, and provide opportunities for musical variations that enrich the song. Composers or musicians can sometimes show their skills in the interlude section, bringing a certain feel to the song. With interludes, the music feels more varied and more beautiful.

Outro is the closing part of a song. The composition is also made different from the verse, interlude, bridge and chorus, so that it gives its own impression. The outro is characterized by a melody that tends to decrease and decrease in intensity. Sometimes there is a repetition of the last chorus lyric. The fade out technique is sometimes used in this section, which gives the impression that the sound is disappearing. The tempo in the outer is sometimes slowed down a little to signify that the song is about to end. Common structures include Intro-Verse1-Verse 2-Chorus-Interlude-Verse 2-Chorus-Outro.

This example is a common form of music which is used in most pop and rock songs.

6.1.4 Create a Melody

Creating a melody involves various methods, with composers often drawing inspiration from the music they listen to. The familiarity with a collection of songs can assist in the creation of a melody, contributing to the skill of top musicians in this area. Generally, the creative process of developing a melody begins with chord progressions. Once a chord progression is established, a musician can then hum or whistle to fill in the melody. Another technique involves using specific tone scales, such as the major or minor

scale, to generate a song melody. Additionally, the use of phrases is common in melody creation, with question phrases followed by answer phrases often employed. Professional musicians usually already have their own melodic character that even when the listener listens to the initial verse, they immediately recognize that the song is a song from that musician. This can be achieved due to the consistency of making melodies with certain tones. These approaches all contribute to the art of crafting memorable melodies in music. Start Simple with Hum or play a simple tune on an instrument like the piano or guitar. Furthermore, expand the melody; once you have a basic tune, build upon it by adding variety, like altering the rhythm or pitch. Focus on creating a memorable or expressive melody that reflects your theme or emotion.

6.1.5 Develop Harmony (Chords)

Arranging chords in songwriting the first thing to do is determine the basic key or tonality. Determining the tonality or basic key is very important because it will affect the chords used. For example, if you use the basic key of C major then the main chords used are C, Dm, Em, F, G, Am, and Bdim while if you choose A minor chords you can use Am, Bdim, C, Dm, Em, F, G. Choose chords that fit your melody, you can use basic chords like major and minor, or experiment with more complex harmonies depending on the mood you want to convey. Try simple chord progressions, the example: **I-IV-V** (C-F-G in C major) are often used in many genres but do not hesitate to create your own patterns. Chord progressions that give an emotional feel or are suitable for sad songs or ballads can use **vi-IV-I-V** (Am-F-C-G- in the basic key of C Major or A minor). Chord experiments can also be done to make the resulting chord sound more interesting by using inversions or chord variations such as sus or add chords. For example, in the key of C Major instead of playing C Major you can try using Cmaj7 or Cadd9. Harmony supports the melody and enriches the emotional depth of your composition.

6.1.6 Make Rhythm

Determining the tempo is very important In making a song, because from this stage you can direct the song you make towards fast for energetic or slow for relaxing music. The tempo in a song is usually measured by BPM (Beat per Minute). For example, 120 BPM is a fast tempo, and 60 BPM is a slow tempo song. Second, determine the time signature to show how many beats in one bar. For example, time signature 4/4, then there are 4 beats in one bar. Another example is a 3/4-time signature, so there are 3 beats in one bar. Each time signature will create its own characteristics. Determine time signature, decide on a meter (4/4 is common in pop, 3/4 for waltzes, etc.). After determining the time signature, then determine the pattern, or the placement of notes and rest marks in the music, so that it forms a pattern. Adding syncopation in making songs sometimes makes our songs feel more varied and interesting.

6.1.7 Arrange the Song

Arrangement is the process of arranging or rearranging a song or music. Song arrangement can be made when some of the things above that have been discussed have been

determined. For example, you already have a genre that will be made, have determined the chord progression, have determined what instruments will be included in the song, and the song structure has been determined. If all of that has been determined, then the next step is to arrange the song. In arranging creativity is very important because the arranger has the freedom to explore new sounds and techniques in a song. An example of an arrangement done by adding string instruments to a pop song genre to make the song feel more majestic or strengthen the sadness in a ballad song. Giving a charming guitar solo part with distortion effects in the interlude section of a rock song is a common thing for rock bands to do, what if you do it in other genres will become a different musical work. Write for Instruments: If composing for multiple instruments, decide how each one will contribute to the overall texture (e.g., guitar for chords, Violin for melody, drums for rhythm). Layer the instruments and think about how different sounds work together. Start with the main melody and layer supporting instruments or harmonies around it.

6.1.8 Add Dynamics and Articulation

Dynamics is the level of volume performed in a musical performance according to the desired emotion. Determining dynamics can be done by adjusting the peaks and lows of a song. For example, the soft part (piano/p) is done in the lyrics that want to show a calm or introspective impression and the peak or loud part (forte/f) to express the intensity, enthusiasm or purpose of the song. The use of Crescendo and Decrescendo can be done in the arrangement of a song. Crescendo is used to gradually increase the volume from soft to loud, while decrescendo is used to increase the volume from loud to soft. Determining articulation is also important in music arrangement. For example, using legato technique makes the notes sound connected, this technique is suitable for calm or melancholic songs. The use of staccato is suitable for parts that you want to sharpen or seem rhythmic, while the marcato technique by applying pressure to certain parts of the song aims to emphasize certain verses. When these dynamics and articulation techniques are used, it will add a certain feel to a song.

Vary volume and intensity, incorporate changes in dynamics (loud or soft) to add emotional weight and interest. Articulation is important to use in music composition. Decide how notes should be played (e.g., staccato for sharp, quick notes or legato for smooth transitions) to enhance the expressiveness of your composition.

6.1.9 Notate and Record the Music

Write sheet music, if you're composing for others to play, notate your composition using software like MuseScore, Finale, or Sibelius, or handwrite the sheet music if you prefer. Then find your designated musician to play the notes of your song. Rehearse all parts of the song well, then when the song notation has been played well by the musician then the song can be recorded. Furthermore, record a demo, if notation is not necessary, record a demo version using software such as Cubase, Studio One, and Fruity Loops to capture the essence of your composition. Recording can be done with various

DAWs. After completing the recording of the song, what is done is to review the recording of the song then if the review is complete, what is done is mixing and mastering the audio. After mixing and mastering is done, the song can be enjoyed.

6.2 Suno AI Music Composition

Basically, AI makes it easier for humans to create work. Suno is one of the AI-based applications that makes it easier for humans to create musical compositions. With the Suno AI application we can create new musical compositions very quickly, approximately only 1 minute. The following are the steps for creating a musical composition using the Suno AI application.



Fig. 2. Steps in making music compositions using Suno AI

6.2.1 Determine the Style of Music

Determining the genre or style of music is the first step when we enter the Suno AI application. Creators are invited to type in the style of music column to express the desired music genre later.

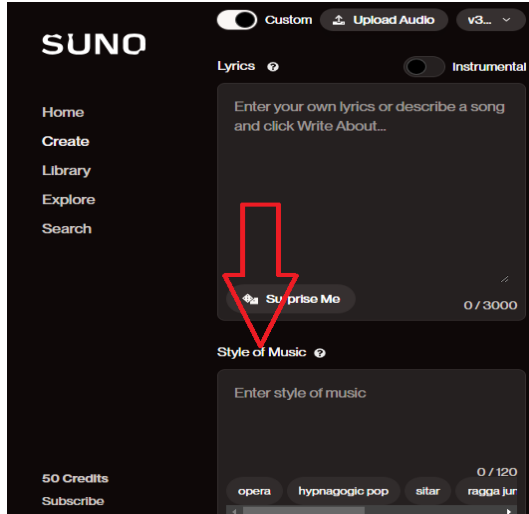


Fig. 3. Style of music column in Suno AI

6.2.2 Make a Title

After determining the style of music, creators are usually directed to create a song title that suits their wishes.

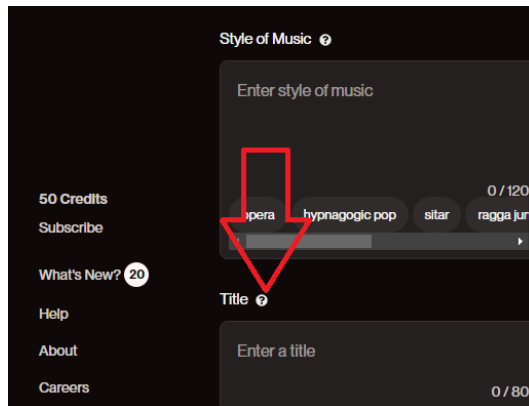


Fig. 4. Title column in Suno AI

6.2.3 Click Create Button

This step is the last step when we create a music composition using Suno AI. When we press the create button, a new song with a predetermined title and genre will automatically appear in the right column.

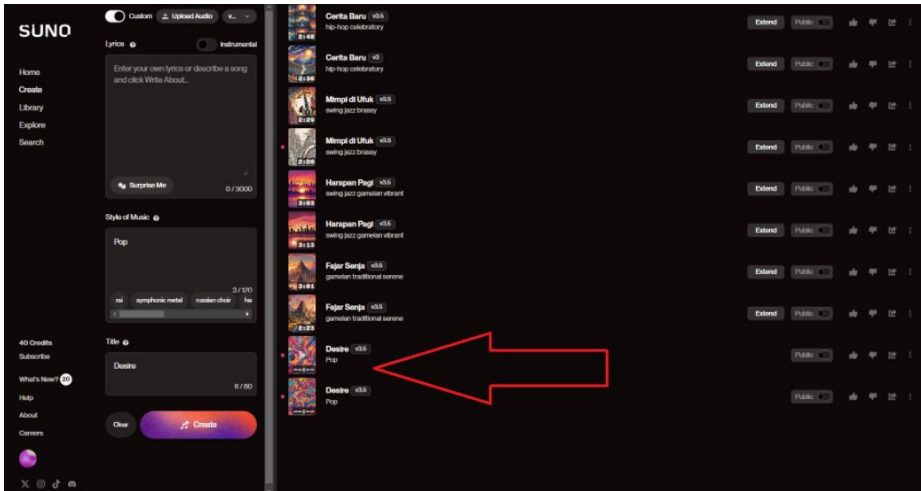


Fig. 5. New Song Suno AI

6.3 SWOT Analysis

This study uses SWOT analysis to dissect the differences between conventional music composition and music composition using Suno AI. In addition, by applying SWOT analysis, researchers can find out the Strength (S), Weakness (W), Opportunity (O) and Threats (T), of each method in creating music composition (Permas, A., Hasibuan-Sedyono, C., Pranoto, L.H., Saputro, T. 2003).

Table 1. Conventional music composition

No	Strength	Weakness	Opportunity	Threats
1	More Variations	Need More Time	Improve Musical Skills	Abandoned
2	Unique	Production Cost	Mixing and Mastering Manually	AI Music producer

Table 2. Suno AI music composition

No	Strength	Weakness	Opportunity	Threats
1	Rapid	Less of Humanity Music	Automatically of Creativity and Production	Competitors
2	Automatically of Mixing and Mastering	Inconsistent Quality	No Musical Knowledge Required	AI Plagiarism Detected

7 Conclusion

The process of composing music using conventional methods takes a very long time, up to days or weeks. Whereas using Suno AI makes it easier and faster for humans in the music production process but is not specific to the desire of professional composers. Making music with the Suno AI application does not require someone to master musicology. The use of AI in making music is vulnerable to detection by AI plagiarism and isn't morally ethical.

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