

Prompting Protocol

There are 2 sets of prompts:

- Prompts that are used for LLM's in order to help test out written music theory, and written lyrics
- Prompts that are used specifically for Suno, as Suno is an AI Song platform that actually makes the song for you, something that you can download

These are the prompts that we used to help test mock scenarios and tasks

We made these prompts such that they are able to test "typical", "edge" and "failure" cases

Prompts for LLM's

Prompt 1

Generate a 10 line beginner-friendly song plan about “sunsets and happy people.”

Requirements:

- Use clearly labeled sections: Intro, Verse, Chorus, Verse 2, Bridge, Outro.
- Keep language simple and catchy.
- Provide:
 - BPM (with explanation)
 - Chord progression (at least 4 chords)
 - Description of drum pattern
 - Description of bassline role
- Keep everything intro-to-mid level complexity.
- Avoid advanced music theory terminology.

Prompt 2

Create a 10 line beat plan for a nostalgic but uplifting song at exactly 92 BPM.

Constraints:

- Use only these instruments: kick, snare/clap, hi-hat, bass, simple melody.
- Provide an 8-bar chord progression (one chord per bar).
- Describe the drum pattern per bar.
- The chorus must contain exactly 8 lines, and each line must be 6–8 syllables.

- Keep explanations simple and beginner-friendly.

Do not exceed these constraints.

Prompt 3:

Based on your previous output:

- Keep the same BPM.
- Make the song feel more energetic without adding new instruments.
- Modify only the drum pattern and bassline.
- Explain exactly what changed and why.

Then output:

- An 8-bar table showing:
Bar | Chord | Kick Pattern | Snare Pattern | Hi-Hat Pattern

Format the table clearly so it could be used to generate a MIDI file.

Remember only 10 lines

Prompts for Suno

Suno Prompts

Prompt 1 (Very Clear + Structured)

Upbeat pop song about sunsets and happy people. 95 BPM. Simple chord progression like G–D–Em–C. Clear structure: Intro, Verse, Chorus, Verse 2, Bridge, Outro. Catchy chorus. Warm acoustic guitar, soft drums (kick on 1 and 3, snare on 2 and 4), simple bass following root notes. Beginner-friendly arrangement. Positive, golden-hour vibe.

Prompt 2 (More Emotional + Detailed)

Feel-good indie pop track about watching sunsets with friends. Around 90–100 BPM. Simple four-chord loop (G, D, Em, C). Light drum groove with steady hi-hats, simple bassline supporting chords. Clear labeled sections: Intro, Verse, Chorus, Verse 2, Bridge, Outro. Catchy, easy-to-sing chorus. Warm and uplifting mood.

Prompt Option 3 (Sad Version – Short + Efficient)

Very emotional sad pop song about missing someone, 95 BPM, simple chord progression (G–D–Em–C), soft acoustic guitar, gentle pop drums (kick on 1 and 3, snare on 2 and 4), clean bassline following chord roots. Clear sections: Intro, Verse, Chorus, Verse 2, Bridge, Outro. Melancholic but catchy and beginner-friendly.

Oppurtunity Framing

Opportunity Framing:

What is the problem?:

Existing AI tools for music creation fall into two extremes:

Black-box generators (Suno, Udio)

These tools produce high-quality songs instantly but provide little transparency, customization, or educational value. Users cannot meaningfully control structure, chord progressions, or beat components.

Text-only assistants (ChatGPT, Gemini, Copilot)

These tools are strong at lyric generation and brainstorming but lack musical alignment. The outputs often ignore meter, chord structure, BPM, and do not provide exportable beat artifacts such as MIDI files.

There is currently no tool that combines:

- Structured songwriting
- Beginner-friendly beat creation
- Educational explanation
- Exportable musical artifacts
- Guided user control

BeatAI's main goal is designed to help with this

Product Requirements

1. A Structured Script

The tool must:

- Generate clearly labeled sections (Intro, Verse, Chorus, Bridge, Outro)
- Maintain logical narrative flow across sections
- Keep language appropriate for beginner users
- Allow topic-based customization

This addresses the failure of existing tools to consistently generate structurally coherent scripts aligned to beat progression.

2. The beats must align with the music

The tool must:

- Generate a BPM based on the mood the user chooses
- Produce a chord progression aligned to emotions in the song
- Specify the drum, bass, and melody roles
- Keep the complexity at an intro-to-mid level

This corrects the disconnect between lyrics and music seen in text-only assistants.

3. Educational Layer (“Learning Mode”)

The tool must:

- Explain why the chords were chosen
- Explain why the BPM fits the mood
- Describe the role of each instrument within the song
- Avoid talking about advanced music theory

This differentiates BeatAI from black-box generators by making the creative process transparent.

Prompt transcripts & outputs

In the three Subtabs, we discuss the model responses to our three prompts

We tested out the prompts of ChatGPT, Gemini, and Suno

ChatGPT Response

ChatGPT Prompt 1 Response:

Song Plan: “Golden Skies”

BPM: 100 BPM

This is a relaxed, feel-good tempo — not too slow, not too fast. Easy to clap to and great for a happy sunset vibe.

Chord Progression (simple & catchy):

Verse: C – G – Am – F

Chorus: F – C – G – Am

(These 4 chords repeat in a loop. Very common and easy to play.)

Drum Pattern (Simple Pop Groove)

- Kick drum on beats 1 and 3
 - Snare on beats 2 and 4
 - Hi-hat playing steady “tick tick tick tick” evenly
 - In the chorus, add slightly stronger kick hits for energy
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Bassline Role

- Bass plays the root note of each chord (C, G, A, F)
 - Follows the kick drum rhythm
 - Can add small walking notes between chords for movement
 - Keeps the song grounded and warm
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Song Structure (10 Lines Total)

Intro

Soft guitar plays C – G – Am – F as light drums fade in.

Verse

Sun goes down, the sky turns gold

Chorus

Happy hearts in the evening glow

Verse 2

Laughing loud as the cool winds blow

Bridge

Hold this light, don't let it go

Outro

Golden skies and smiling souls

ChatGPT Prompt 2 Response:

Beat Plan — Nostalgic but Uplifting

Tempo: 92 BPM (exact)

92 BPM feels calm and reflective, but still steady enough to groove.

Instruments Used Only: kick, snare/clap, hi-hat, bass, simple melody

8-Bar Chord Progression (1 chord per bar)

1. C
2. G
3. Am
4. F
5. C
6. G
7. F
8. Am

(Loop this progression for verse and chorus.)

Drum Pattern (Per Bar Description)

Bar 1: Kick on beat 1 and 3, snare on 2 and 4, hi-hat steady eighth notes.

Bar 2: Same as bar 1, slightly softer hi-hat.

Bar 3: Add an extra kick right before beat 3.

Bar 4: Same groove, small hi-hat pause before beat 4.

Bar 5: Return to basic groove (kick 1 & 3, snare 2 & 4).

Bar 6: Add light clap layered with snare on 2 and 4.

Bar 7: Extra kick before beat 1 for lift.

Bar 8: Simple groove, open hi-hat on beat 4 to lead back to bar 1.

Bass Role

- Plays root notes (C, G, A, F, etc.).
 - Follows the kick rhythm.
 - Holds notes longer in verse.
 - Slightly more movement (short passing notes) in chorus.
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Simple Melody

- Use short, warm notes.
 - Stay close to chord tones.
 - Repeat a small 4-note idea so it feels nostalgic.
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Chorus (8 lines, 6–8 syllables each)

Golden light on old streets
Memories drift so sweet
Warm air, summer breeze
Time moves slow with ease
We were young and free
Chasing what could be

Hold on to the sound
Hope is all around

ChatGPT Prompt 3 Response:

BPM stays 92.

What changed & why:

1. Kick now has extra hits before beats 2 and 4 → adds drive and forward push.
2. Snare/clap now has light ghost hits right before 2 and 4 → feels more energetic.
3. Hi-hat now uses steady 16th notes instead of 8ths → tighter and more active.
4. Bar 4 and 8 include a small kick build into the next bar → creates lift.
5. Bass now plays shorter notes instead of long holds → more movement.
6. Bass follows kick accents closely → groove feels tighter.
7. Bass adds quick passing note before chord change → smoother transitions.
8. Bass rhythm is more bouncy in bars 5–8 → chorus energy boost.
9. No new instruments added → same sound palette, more motion.
10. Overall result: more bounce and momentum while staying nostalgic.

8-Bar MIDI-Ready Table

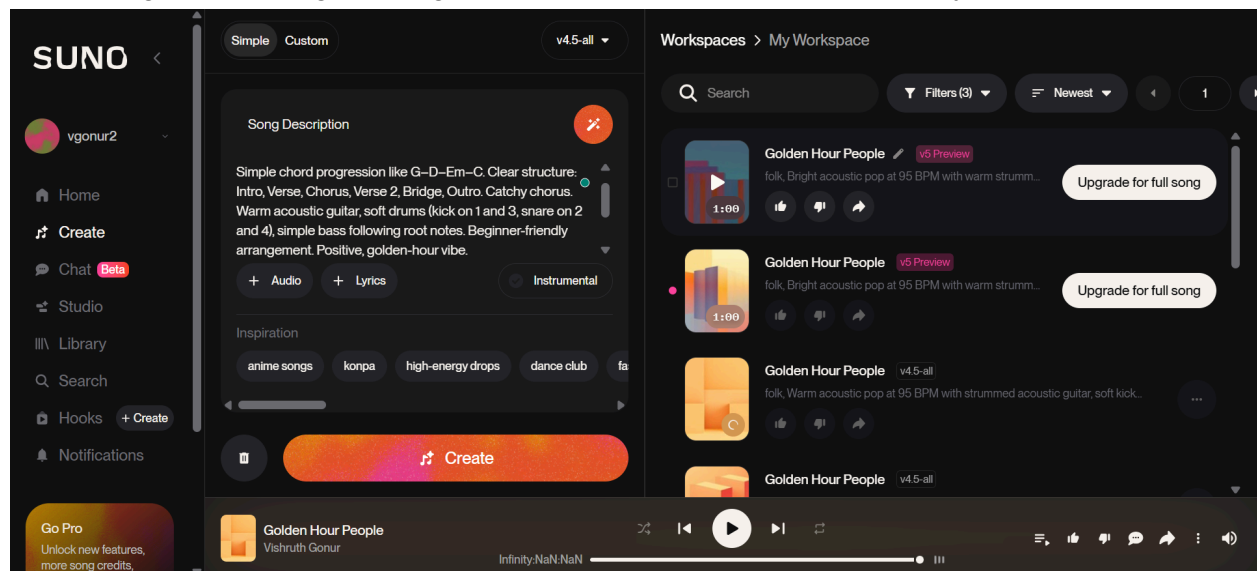
Bar	Chord	Kick Pattern	Snare Pattern	Hi-Hat Pattern
1	C	1, 1&, 3	2, 4	16th notes steady
2	G	1, 2&, 3	2, 4	16th notes steady
3	Am	1, 1&, 3, 3&	2, 4	16th notes steady
4	F	1, 3, 4&	2, 4	16th + slight lift at 4

5	C	1, 2&, 3	2, 4	16th notes steady
6	G	1, 1&, 3, 3&	2, 4	16th notes steady
7	F	1, 3, 3&, 4&	2, 4	16th notes steady
8	Am	1, 2&, 3, 4&	2, 4	16th + slight lift at 4

Suno Responses

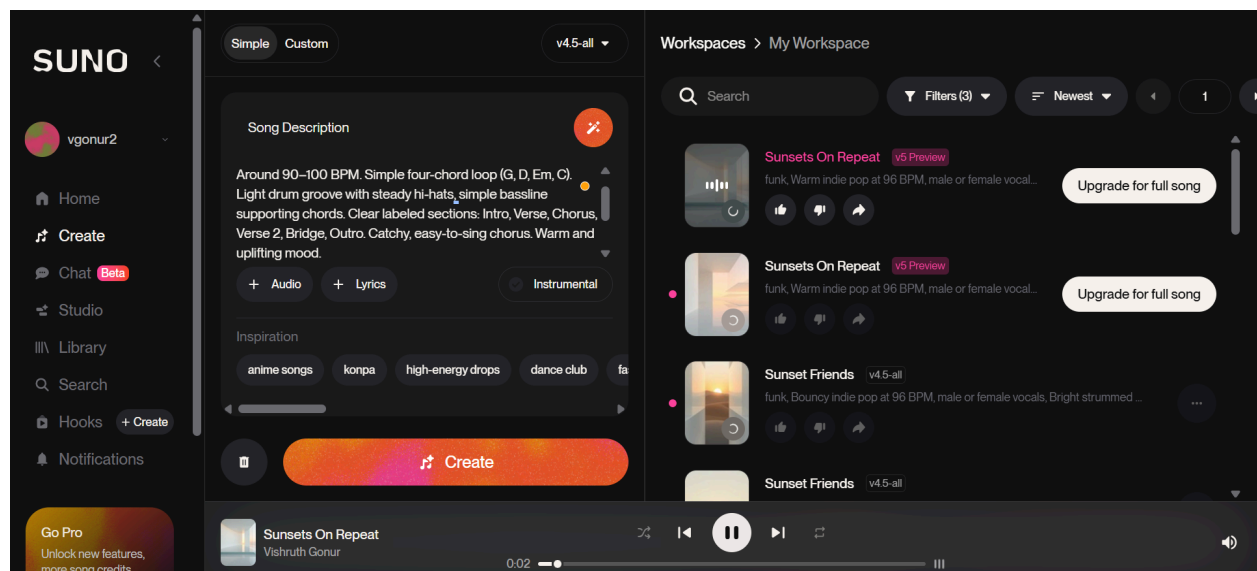
Suno Prompt 1 Response:

Created high beat, energetic songs, about sunshine and rainbows. Clearly followed instructions



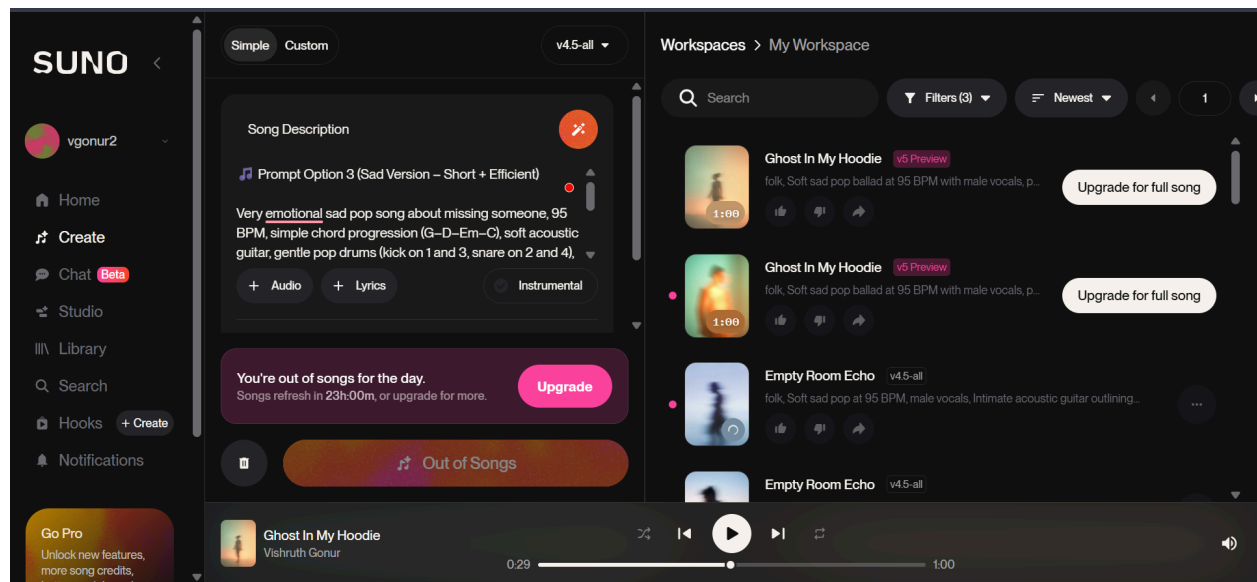
Suno Prompt 2 Response:

Created a calm and simple song, that clearly followed the instructions given. Has that “easy-to-sing” to vibe



Suno Prompt 3 Response:

Once again followed the prompt, however all three songs ended up sounding the exact same. The sadder song just had a slower beat



Gemini Responses

Gemini Response for Prompt 1:

Gemini said

Here is a beginner-friendly plan for your song about sunsets and happy people, along with the track I've generated for you!

Song Plan: "Golden Hour Embrace"

Section Labels & Lyrics (10 Lines):

- **Intro:** (Instrumental - 4 bars)
- **Verse 1:**
 - 10. The sky is turning orange and pink
 - 11. It's a beautiful time to sit and think
- **Chorus:**
 - 10. Golden hour paints the sky
 - 11. All my favorite people by
 - 12. Oh, this feeling is so sweet
 - 13. Watching sunsets, we're complete
- **Verse 2:**
 - 10. Laughter floating on the breeze
 - 11. We are all so much at ease
- **Bridge:**
 - 10. Don't want this light to ever go
- **Outro:**
 - 10. Just stay here in the golden glow

Musical Guide

- **BPM: 90 (Relaxed & Mid-Tempo)**
 - *Explanation:* 90 Beats Per Minute is a "walking pace." It's slow enough to feel chill and happy, but fast enough to keep you nodding your head.
- **Chord Progression: C – G – Am – F**
 - This is the "magic" progression used in hundreds of happy hits. It sounds bright, hopeful, and is very easy to play on guitar or piano.
- **Drum Pattern:**

- A simple "Four-on-the-floor" style but softer. Think: *Kick* on 1 and 3, *Snare/Clap* on 2 and 4. Add a steady "ticking" sound (hi-hats) to keep the rhythm moving like a heartbeat.
- **Bassline Role:**
 - The bass stays simple by playing the "root note" (the main letter) of each chord. Its job is to provide a warm, "fuzzy" foundation that makes the song feel full and cozy.

The music has been created and is ready for you to play! You can listen to the track directly in the chat.

Gemini Responses for Prompt 2:

Gemini said

I've put together a nostalgic and uplifting beat plan at exactly 92 BPM for you.

10-Line Beat Plan

Instruments: Kick, Snare/Clap, Hi-Hat, Bass, Simple Melody.

8-Bar Chord Progression (1 chord per bar):

C – G – Am – F – C – G – F – C

Drum Pattern (Repeated every bar):

- **Kick:** Hits on beats 1 and 3.
- **Snare/Clap:** Hits on beats 2 and 4.
- **Hi-Hat:** Steady 8th notes (8 clicks per bar) to keep the nostalgic pulse.

Chorus Lyrics (8 lines, 6–8 syllables each):

1. Sunlight on my gold-en face (6)
2. Mem-o-ries I now em-brace (7)
3. Warm-est of those hap-py days (7)
4. Lost with-in a child-hood haze (7)
5. Hear a sweet and gen-tle tone (7)
6. Feel-ing like I'm not a-lone (7)
7. Joy is fill-ing up my heart (7)
8. Right from the ver-y start (6)

Simple Melody:

A high-register, "twinkling" synth melody that follows the notes of the chords, adding a touch of wistfulness over the steady bassline.

The music has been created and is ready for you to play! You can listen to the track directly in the chat.

Gemini responses for Part 3:

The Energy Shift: What Changed?

To boost the energy without adding new sounds, I modified the rhythm and frequency:

- ***Drums: Instead of a simple "1 and 3" kick, I added a "double kick" on the third beat and introduced 16th-note hi-hats. Faster hi-hats create "perceived speed," making the song feel like it's moving faster even though the BPM is the same.***
- ***Bassline: The bass moved from long, sustained notes to an 8th-note "driving" pattern. By hitting the note on every half-beat, the song gains a rhythmic "push" that feels more active.***

8-Bar MIDI Generation Table

<u>Bar</u>	<u>Chord</u>	<u>Kick Pattern</u>	<u>Snare Pattern</u>	<u>Hi-Hat Pattern</u>
<u>1</u>	<u>C</u>	<u>1, 3, 3.5</u>	<u>2, 4</u>	<u>1 & a 2 & a 3 & a 4 & a</u>
<u>2</u>	<u>G</u>	<u>1, 3, 3.5</u>	<u>2, 4</u>	<u>1 & a 2 & a 3 & a 4 & a</u>
<u>3</u>	<u>Am</u>	<u>1, 3, 3.5</u>	<u>2, 4</u>	<u>1 & a 2 & a 3 & a 4 & a</u>
<u>4</u>	<u>F</u>	<u>1, 3, 3.5</u>	<u>2, 4</u>	<u>1 & a 2 & a 3 & a 4 & a</u>
<u>5</u>	<u>C</u>	<u>1, 3, 3.5</u>	<u>2, 4</u>	<u>1 & a 2 & a 3 & a 4 & a</u>

<u>6</u>	<u>G</u>	<u>1, 3, 3.5</u>	<u>2, 4</u>	<u>1 & a 2 & a 3 & a 4 & a</u>
<u>7</u>	<u>F</u>	<u>1, 3, 3.5</u>	<u>2, 4</u>	<u>1 & a 2 & a 3 & a 4 & a</u>
<u>8</u>	<u>C</u>	<u>1, 3, 3.5</u>	<u>2, 4</u>	<u>1 & a 2 & a 3 & a 4 & a</u>

Chorus (Modified Energy):

1. Sunlight on my gold-en face
2. Mem-o-ries I now em-brace
3. Warm-est of those hap-py days
4. Lost with-in a child-hood haze
5. Hear a sweet and gen-tle tone
6. Feel-ing like I'm not a-lone
7. Joy is fill-ing up my heart
8. Right from the ver-y start
9. Energy begins to rise
10. Underneath the glowing skies