

Supplementary Information

User Manual for the MuChin-AP Annotation and Quality Control Platform

To ensure consistent annotation standards, a dynamic Q&A document is maintained and is available at: <https://juro5srf2x.feishu.cn/sheets/VojGsLBjhT5d0tek02ckq4nnrb>. Quality Control (QC) Inspectors are responsible for systematically summarizing recurring errors or complex cases encountered during review and updating this Q&A document with these representative examples. This process establishes a clear reference standard for handling similar situations in the future, and all updates are communicated to the annotation team.

1. Musical Phrase Annotation (Professional Group)

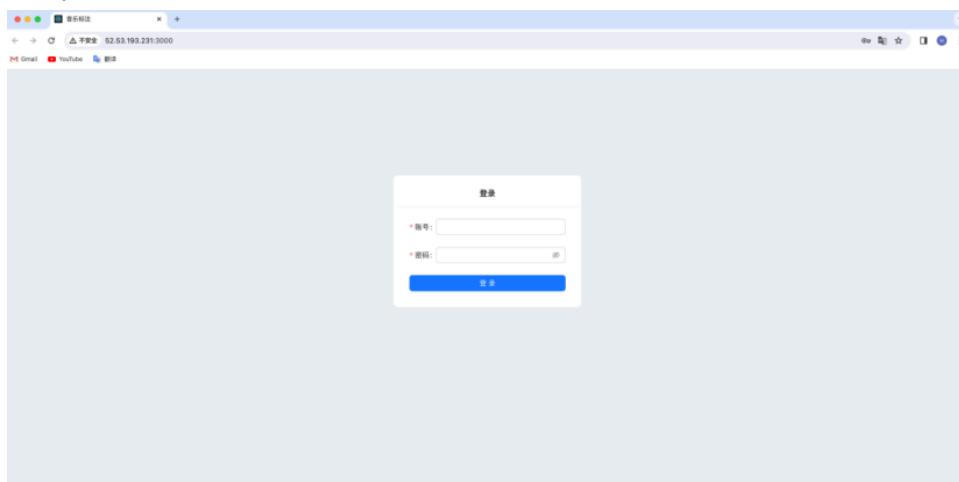
This section details the operational procedures for annotators in the Professional Group, focusing on lyric and musical phrase annotation.

1.1. User Login

It is recommended to use the Google Chrome browser (the latest version is preferred, for both desktop and mobile). Lower browser versions may cause compatibility issues.

Navigate to the following URL: <http://52.53.193.231:3000>/

This will open the login interface as shown below. Please log in using the assigned account and password.



Supplementary Figure 1. The login page for the MuChin-AP platform, showing fields for "Account" (账号) and "Password" (密码).

1.2. Annotator Interface

Upon successful login, the system will display the annotator's task list. The top of the page shows statistics for annotations in various states. If no tasks are visible, click the "Claim Song for Annotation" (领取歌曲标注) button to refresh. To begin a lyric and musical phrase annotation task, click the "Lyrics" (词) button next to the corresponding song title.

The screenshot shows a user interface for a lyric annotator. At the top left, it displays the user's name 'mubp7Jath' and the role '标注员'. On the right, there is a blue button labeled '退出登录' (Logout). Below this, a summary of annotation statistics is shown in red text:

- 正确: 0
- 错误且需要标注: 0
- 错误且需要跳过: 0
- 豁免: 0
- 跳过且正确: 0
- 跳过且错误: 0

The main content area lists songs with their corresponding annotation status. Each song entry consists of the song title, a status indicator, and a blue 'Lyrics' button. The songs listed are:

Song Title	Status	Action (Lyrics)
炸鸡腿	未标注	词
骗自己	未标注	词
qq_375459370	未标注	词
有回忆的人	未标注	词
后来你好吗.	未标注	词
金线莲	未标注	词
那些年的童话	未标注	词
小燕	未标注	词
说好要一起走	未标注	词
中毒	未标注	词
情人和老婆	未标注	词
qq_323226898	未标注	词
幸福等你来	未标注	词
我不是一百分	未标注	词
最好的朋友在身边	未标注	词
忘记我自己	未标注	词
qq_259679620	未标注	词
张开眼睛	未标注	词
qq_707386	未标注	词
看我的歌	未标注	词

Supplementary Figure 2. The main dashboard for a lyric annotator, showing a list of songs assigned for annotation.



Supplementary Figure 3. An alternative view of the annotator dashboard, highlighting the "Claim Song for Annotation" (领取歌曲标注) button and statistics counters.

1.3. Annotation Workflow

The main annotation interface contains an audio player at the top, followed by rows for each line of lyrics. From left to right, each row displays: the lyric, the pinyin for the rhyming character, a button to "add a new line below," a button to "delete this line," and a button to "add a section separator." The workflow consists of three main steps.

如果未自动播放，请手动点击一下播放按钮				
啦啦啦啦啦唱爱的旋律	lv	↓ +	☒ ×	⊕
夜晚与星星永远的默契	qi	↓ +	☒ ×	⊕
甜蜜的约定像啤酒炸鸡	ji	↓ +	☒ ×	⊕
没有你不行	xing	↓ +	☒ ×	⊕
滴答滴答滴听爱的旋律	lv	↓ +	☒ ×	⊕
要和你一起来分享甜蜜	mi	↓ +	☒ ×	⊕
我们的故事简单而美丽	li	↓ +	☒ ×	⊕
一辈子不分离	li	↓ +	☒ ×	⊕
两个人的约定	ding	↓ +	☒ ×	⊕
听心跳的感应	ying	↓ +	☒ ×	⊕
浪漫的瞬间总有你的身影	ying	↓ +	☒ ×	⊕

Supplementary Figure 4. The primary interface for musical phrase annotation,

displaying the audio player, lyrics, and editing controls.

1.3.1. Lyric Verification

The annotator must listen to the entire song to verify the accuracy and completeness of the lyrics.

- **Correction:** Correct any typos, add missing words, and remove superfluous text.
- **External Reference:** For lyrics that are difficult to discern (e.g., due to unclear pronunciation), it is permissible to search for the song's lyrics online for reference purposes only. However, directly copying and pasting external lyrics without careful verification is strictly prohibited. This is because:
 1. Songs often have multiple versions (e.g., live, album, remix) with slight lyrical differences.
 2. Online lyrics are often user-generated and may not be authoritative or accurate.
- **Non-Lyric Content:** Content such as the song title or composer names spoken at the beginning of a track should be deleted.¹
- **Special Cases (Skipping a Song):** If a song exhibits any of the following issues, it should be skipped. Select the appropriate reason from the dropdown menu at the top and click "Confirm and Skip" (确认并跳过).
 - Contains non-Mandarin singing (e.g., Cantonese, English, Korean).
 - Overlapping vocals with different lyrics where the primary vocal line cannot be distinguished.
 - Poor audio quality that significantly hinders lyric identification or musical analysis.
 - The provided lyrics do not match the audio at all.
 - The lyrics have inappropriate content or involve political sensitivities.



Supplementary Figure 5. Dropdown menu showing reasons for skipping a song, including various languages.



Supplementary Figure 6. Continuation of the dropdown menu for skipping a song, showing reasons like overlapping vocals, poor quality, and sensitive content.

- **Handling Repetitive and Expressive Vocals:**

- For words with a consonant-vowel structure (e.g., "啦" la), all repetitions must be transcribed completely. Do not use ellipsis (...) or multipliers (x3).²
- For single-vowel or syllabic words (e.g., "啊" a, "哦" o), even with pitch changes or turns (melisma), it is counted as a single word. A new word is only transcribed if there is a clear pause or breath between utterances.³
- Harmony vocals that are sung simultaneously with the main melody but have different lyrics should be ignored. Focus only on the main melody's lyrics. However, if harmony vocals appear independently and are intelligible, they should be transcribed.⁴

1. 《那些花儿》 - 朴树

...

...

我们就这样 各自奔天涯

啦..... 想她 需改成 > 啦啦啦啦 啦啦啦啦 啦啦啦想她

啦... 她还在开吗 需改成 > 啦啦啦啦 啦啦啦啦 她还在开吗

啦..... 去呀 需改成 > 啦啦啦啦 啦啦啦啦 啦啦啦去呀

她们已经被风吹走散落在天涯

...

...

Supplementary Figure 7. Examples of lyric correction, showing how to handle repeated sounds and expressive utterances.

2. 《千年等一回》-高胜美

	<u>需添加</u> >	啊 啊 啊 啊 啊
	<u>需添加</u> >	哈 吼 嘿 哈 吼 哈 吼 嘿
千年等一回等一回啊	<u>需改成</u> >	千年等一回 等一回啊
千年等一回我无悔啊	<u>需改成</u> >	千年等一回 我无悔啊
是谁在耳边说爱我永不变	<u>需改成</u> >	是谁在耳边 说 爱我永不变
只为这一句啊哈断肠也无怨	<u>需改成</u> >	只为这一句 啊哈 断肠也无怨
雨心碎风流泪梦缠绵情悠远	<u>需改成</u> >	雨心碎 风流泪
		梦缠绵 情悠远呐
Chi-chi-na	<u>需改成</u> >	喳 喳 呐 呐 呐
		喳 喳 呐 呐 呐
西湖的水我的泪		
我情愿和你化作一团火焰		
啊.....啊.....啊.....	<u>需改成</u> >	啊 啊 啊
...		
...		

Supplementary Figure 8. Further examples of lyric correction and additions, including handling background vocals.

3. 《青藏高原》 - 韩红

还是那久久不能忘怀的眷恋
哦 _____需改成____> 哟 啊
我看见一座座山一座座山川
...
...

Supplementary Figure 9. A final example of lyric correction for a melismatic vocal.

1.3.2. Musical Section Annotation

This step involves identifying the structural sections of the song (e.g., Verse, Chorus). Listen for recurring melodic fragments and changes in the accompaniment to determine the boundaries of each section.

- **Procedure:** To mark the end of a section, click the "+" button on the last line of that

section. This adds a separator line. Then, select the appropriate section label from the dropdown menu.

- **Section Labels:** The available labels are:
 1. **Intro** (前奏): Typically instrumental.
 2. **Verse** (主歌)
 3. **Pre-chorus** (预副歌)
 4. **Chorus** (副歌)
 5. **Interlude** (间奏): Typically instrumental.
 6. **Bridge** (桥段)
 7. **Outro** (尾奏): Typically instrumental.
- **Handling Vocals in Instrumental Sections:** If vocals appear within what would normally be an Intro, Interlude, or Outro, they should be labeled as such.⁵
- **Section Numbering:** The numbering of sections (e.g., Verse 1, Verse 2) is left to the annotator's discretion, based on their musical understanding of the song's structure.⁶



Supplementary Figure 10. The interface for annotating musical sections, showing the dropdown menu with options like **Verse** (主歌), **Chorus** (副歌), and **Bridge** (桥段).



Supplementary Figure 11. An example of a song with multiple annotated sections, including Chorus 2, Bridge 1, and Chorus 3.

1.3.3. Rhyme Verification

The system automatically highlights words at the end of lines that share the same rhyme within a section. The annotator's task is to check and correct the pinyin for multi-syllable characters based on the context and pronunciation in the song. After correcting the pinyin, press the "Enter" key to update the rhyme highlighting.⁷

1.4. Suspending a Task

If an annotator encounters a problem not covered in this manual or a technical issue that prevents the completion of a task, they can click the "Suspend" (挂起) button in the lower-left corner. A dialog box will appear, prompting for a reason. After submission, the task will be escalated to an administrator.⁸



Supplementary Figure 12. The "Suspend and Report Reason" (挂起搁置并反馈原因) button and the final "Submit" (提交) button.



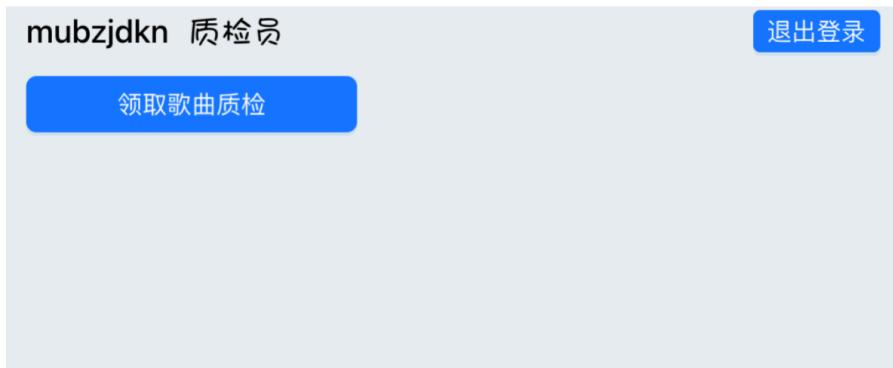
Supplementary Figure 13. The dialog box for suspending a task, asking the user to input the reason.

2. Quality Control (QC) for Musical Phrase Annotation

This section outlines the workflow for Quality Inspectors who review the work of Professional Group annotators.

2.1. QC Inspector Interface

After logging in with a QC account, click the "Claim Song for Quality Check" (领取歌曲质检) button to receive a list of tasks.

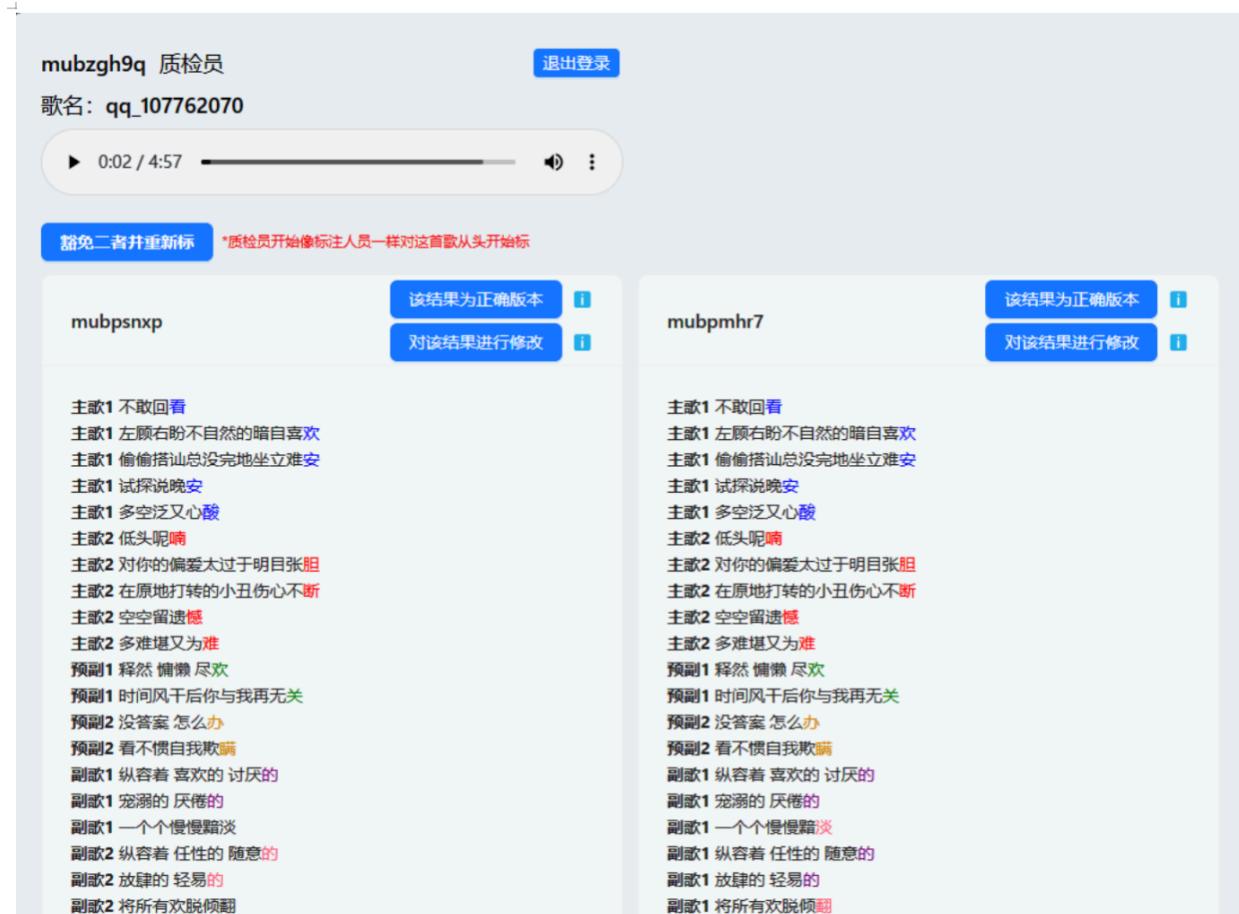


Supplementary Figure 14. The main dashboard for a QC Inspector.



Supplementary Figure 15. The QC Inspector's task list, showing songs ready for review.

Click the "Lyrics" (词) button to open the QC interface. The screen will display the results from two different annotators for the same song side-by-side. (Note: On mobile devices in portrait mode, the view is stacked vertically. It is recommended to perform QC on a PC, laptop, or tablet for better efficiency).¹⁰



Supplementary Figure 16. The side-by-side QC interface, showing two different annotations for the same song.

2.2. QC Workflow

The core task is to compare the two annotations and determine the correct version based on the standards outlined in Section 1.¹¹

- **Scenario 1: One Annotation is Correct.** If one annotation is entirely correct (lyrics, section divisions, and rhymes), click the "This result is the correct version" (该结果为正确版本) button for that annotation. The other will be marked as incorrect.¹²
- **Scenario 2: Both Annotations have Errors.** There are two options:
 1. **Modify and Correct:** Choose the annotation with fewer errors and click "Modify this result" (对该结果进行修改). This opens the standard annotation editor. After correcting the errors and submitting, both original annotations will be marked as incorrect, and the QC Inspector's version will be saved as the definitive one.¹³
 2. **Exempt and Re-annotate:** If the song is exceptionally complex or ambiguous and a definitive standard is not available, click the "Exempt both and re-annotate" (豁免二者并重新标) button. This marks both original annotations as "exempt,"

meaning the annotators are still compensated as if their work was correct. The QC Inspector must then annotate the song from scratch. The inspector is also responsible for documenting the complex case and updating the Q&A document to establish a standard for future occurrences.¹⁴

After submitting the final version, the task is complete. Click "Claim Song for Quality Check" again to receive a new batch of tasks.¹⁵

3. Song Annotation (Amateur Group)

This section details the operational procedures for annotators in the Amateur Group, focusing on descriptive song tagging.

3.1. User Login

The login process is identical to that of the Professional Group (see Section 1.1).



Supplementary Figure 17. The login page for the MuChin-AP platform.

3.2. Annotator Interface

After logging in, the annotator's task list is displayed. To begin a song description task, click the "Music" (曲) button next to the corresponding song title.¹⁶

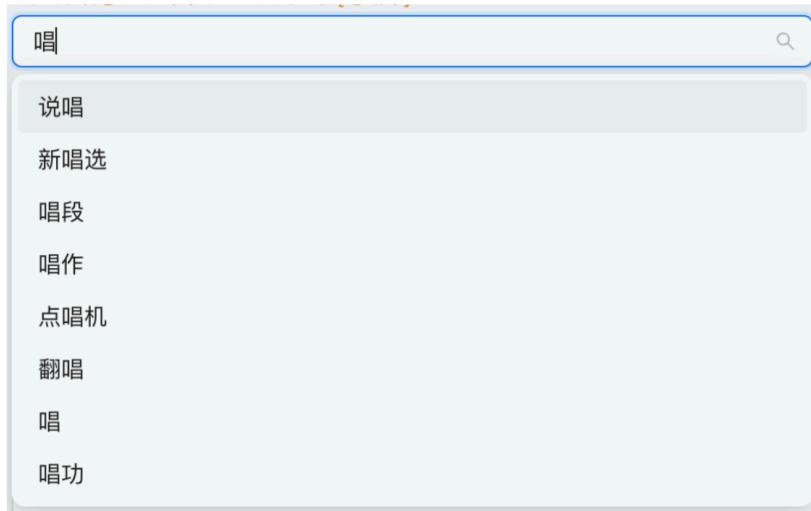
mubqUTRSh 标注员	退出登录
宝宝高兴	曲
轻烟	曲
qq_4935170	曲
天の川	曲
注定在一起	曲
吻我的样子	曲
qq_7023943	曲
在那银色的月光下	曲
qq_444619	曲
真情永在	曲
你走就走了吧	曲
qq_386542418	曲

Supplementary Figure 18. The main dashboard for an Amateur Group annotator, showing a list of songs.

The annotation page will open, and the song will begin playing automatically. The lyrics are available at the bottom of the page for reference. The primary task is to answer a series of questions about the song using tags and written descriptions. Tags can be created manually or selected from a list of suggestions that appear when typing.¹⁷



Supplementary Figure 19. The song annotation interface for the Amateur Group, showing the questions and input fields.



Supplementary Figure 20. An example of the tag input field with search-based suggestions.

3.3. Annotation Questions

There are nine questions to answer for each song.

1. **Overall Feeling:** Describe the song's feeling from four perspectives using tags, plus a written description of at least 50 characters.
 - **Distinctive Feeling:** (e.g., "Exotic," "Mysterious," "Rock").
 - **Tempo Feeling:** (e.g., "Dynamic," "Fast," "Soothing").
 - **Expressive Feeling (Vocals):** (e.g., "Heartfelt," "Energetic").
 - **Emotional Feeling (Lyrics):** (e.g., "Hilarious," "Melancholy," "emo").

1、这首歌带给你的感受？

特色感受：

*除特色外还可以写你认为的风格，如[摇滚乐]

请选择或输入至少3个标签

快慢感受：

请选择或输入至少3个标签

表现力感受（歌手）：

请选择或输入至少3个标签

情绪感受（歌词）：

请选择或输入至少3个标签

描述：

请输入至少50字的描述

0 / 300

Supplementary Figure 21. The "Overall Feeling" question group.

2. **Lyrics and Theme:** Summarize the song's theme based on the lyrics and music. The text description is pre-generated by a GPT model; the annotator must add at least three relevant tags and verify/edit the text for accuracy and fluency. 20

2、这首歌的歌词风格？结合歌词内容和音乐对整首歌的主题进行简单总结？

歌词和主题内容：

请选择或输入至少3个标签

这首歌呈现出一种对生活的轻松态度和乐观情绪。歌词中表达了对自己常常胡思乱想、糊里糊涂的认识，但仍然能够在夜晚保持精神状态的心境。整首歌歌词带有一种调皮、自在的氛围，对于适应生活中的各种琐事和压力有一种随心所欲的态度。音乐风格轻快活泼，旋律欢快易记，展现出一种积极快乐的心境。

Supplementary Figure 22. The "Lyrics and Theme" question, with a pre-filled description.

3. **Instrumentation and Sound Effects:** Identify the instruments and any sound effects (e.g., dialogue, rain, city noises). The description should be at least 20 characters and mention where each element appears in the song.²¹

3、这首歌用到了什么乐器和音效?包括电子音、现实世界音效采样等（如对白、集市环境音、汽车、铃声、雨声等）

配器与音效：

*只需把自己能分辨出来的写出即可，不用担心对错。

请选择或输入至少3个标签

▼

请输入至少20字的描述

0 / 300

4. **Vocals and Singing:** Describe the characteristics of the vocals using tags and a description of at least 20 characters (e.g., gender, vocal range, singing style).²²

4、这首歌的人声有什么特点？

歌唱和人声：

*还有如[美声] [男高音] [男女对唱] [童声合唱] [电音] [说唱] [阿卡贝拉] [电话音] [哼唱]等。

请选择或输入至少3个标签

▼

请输入至少20字的描述

0 / 300

Supplementary Figure 23. The "Instrumentation" and "Vocals" questions.

5. **Sound Quality:** Judge the audio quality ("Clear" or "Not Clear"). Additionally, determine if the track is a "Live Version" or has a "Lo-Fi" effect. If "Yes" is selected for either, a description of at least 7 characters is required. Low quality is defined as sound that negatively impacts the listening experience.²³

5、这首歌的音质怎么样？是否是现场版？是否是Lo-Fi或有其它低音质效果？
音质：

清晰 不清晰

现场版：

如果选择“是”，请输入至少7字描述

是 否

0 / 300

Lo-Fi：

*低保真，类似磁带效果

如果选择“是”，请输入至少7字描述

是 否

0 / 300

Supplementary Figure 24. The "Sound Quality" question group.

6. **Song Use Case:** List potential uses for the song (e.g., "Sleep," "Workout," "Wedding"). At least one tag and a 20-character description are required.²⁴

6、这首歌是否可以用于包括但不限于以下用途：助眠、运动、节日庆典、生日、婚礼、葬礼、校歌、企业歌曲、表白、宗教等？

歌曲用途：

*尽量思考下各种神奇用途，如果你拿到这个音乐可以用来做什么，越多越好，比如给家人亲人、讽刺吐槽什么人、骑车、写作业。。

请选择或输入至少1个标签



请输入至少20字的描述

0 / 300

7. **Cultural and Regional Context:** Identify any cultural or regional background associated with the song (e.g., traditional music, religious themes, historical context). If none, use the tag "No regional cultural characteristics." Requires at least one tag and a 15-character description.²⁵

7、这首歌是否包含、或让你联想到一些文化与地域的背景？如传统音乐、民族音乐、地区文化、宗教信仰、历史背景等。

文化与地域：

*如[小日子] [漂亮国] [热带雨林] [西海岸] [基督教] [大草原] [气突苏] [没有地域文化特点]等

请选择或输入至少1个标签



请输入至少15字的描述

0 / 300

Supplementary Figure 25. The "Use Case" and "Cultural Context" questions.

8. **Target Audience:** Describe the suitable age group or demographic for the song. At least one tag and a 15-character description are required.²⁶

8、这首歌是否有明确的年龄特征？适合或者不适合某些人群

适用人群：

如可爱儿歌适合[儿童], 广场舞曲/夕阳红歌曲适合[中老年人], 奋发向上的歌曲适合[少年], 色情欲望相关的不适合[儿童][少年]

请选择或输入至少1个标签



请输入至少15字的描述

0 / 300

9. **Other (Optional):** Add any other relevant comments or observations not covered by the previous questions. 27

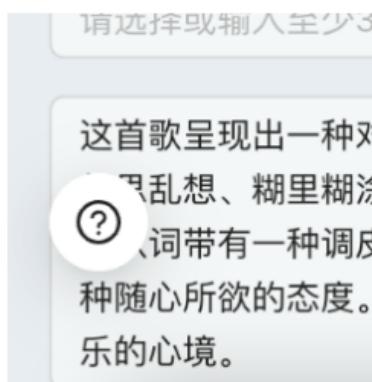
9、其他(选填)

描述：

请输入您的描述（非必填）

Supplementary Figure 26. The "Target Audience" and "Other" questions, along with the "Submit" button.

The "Suspend" function is also available for this task type (see Section 1.4).



Supplementary Figure 27. The song annotation interface for the Amateur Group.



Supplementary Figure 28. The dialog box for suspending a task.

4. Quality Control (QC) for Song Annotation

This section outlines the workflow for QC Inspectors who review the work of Amateur Group annotators.

4.1. QC Inspector Interface

After logging in, the QC Inspector will see a list of song annotations to review. Click the "Music" (曲) button to begin.²⁸

mubzwJkc 质检员	退出登录
qq_397468733(非专业)	<input type="button" value="曲"/>
qq_396664946(非专业)	<input type="button" value="曲"/>
不会再有错(非专业)	<input type="button" value="曲"/>
qq_100534605(非专业)	<input type="button" value="曲"/>
qq_651382(非专业)	<input type="button" value="曲"/>
qq_102636800(非专业)	<input type="button" value="曲"/>
往后余生不再相见(非专业)	<input type="button" value="曲"/>
qq_362734651(非专业)	<input type="button" value="曲"/>
qq_102696799(非专业)	<input type="button" value="曲"/>
绿色的雨(非专业)	<input type="button" value="曲"/>
想你也是醉了(非专业)	<input type="button" value="曲"/>
一刀两断(非专业)	<input type="button" value="曲"/>
qq_329685217(非专业)	<input type="button" value="曲"/>
自我欣赏(非专业)	<input type="button" value="曲"/>
qq_279455653(非专业)	<input type="button" value="曲"/>
qq_336975483(非专业)	<input type="button" value="曲"/>
越战越强(非专业)	<input type="button" value="曲"/>
qq_351790322(非专业)	<input type="button" value="曲"/>
qq_368859754(非专业)	<input type="button" value="曲"/>
三浦白茶(非专业)	<input type="button" value="曲"/>

Supplementary Figure 29. The QC Inspector's task list for Amateur Group submissions.

The QC interface displays the annotator's answers and provides fields for the inspector to enter a score for each question.

mubzwJkc 质检员 退出登录

歌名 : qq_397468733

▶ 0:07 / 4:03 音量 : ⏮ ⏯

1、这首歌带给你的感受？

特色感受 : 请输入分数

8分，其中标签数1-4对应1-4分，创新性0-4分。

流行歌曲 情歌 伤感 分手 失眠 ▼

快慢感受 : 请输入分数

5分，其中准确性0-3分，创新性0-2分。

中速 较慢 缓慢 ▼

表现力感受（歌手） : 请输入分数

13分，其中标签数1-4对应1-4分，最多4分；准确性0-4分，多个无效标签可酌情减分；创新性0-5分。

情绪递进 好听 代入感 泪目 ▼

情绪感受（歌词） : 请输入分数

13分，其中标签数1-4对应1-4分，最多4分；准确性0-4分，多个无效标签可酌情减分；创新性0-5分。

真挚 表达 挣扎 无奈 懊恼 ▼

描述 : 请输入分数

8分，其中准确性3分，字数+创新性5分。

歌词讲述了一个被感情伤害的人，经历了失眠以及对前任非常痛苦的回忆。
歌曲表达了希望时间可以带走这些忧伤情绪，让自己能够好受一点，不被痛苦的思念所折磨。

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Supplementary Figure 30. The QC scoring interface, showing the annotator's answers and score input fields.

4.2. Scoring Rubric

The QC Inspector's task is to listen to the song and score the annotator's submission based on the following criteria.

- **General Rule for "Innovation":** For scoring categories that include "Innovation" (创新性), the score defaults to half of the maximum points, rounded down. The inspector then adjusts this score up or down based on the quality of the answer.³⁰
- **Question 3 (Instrumentation):** If a song has fewer than four instruments and the annotator correctly identifies all of them, the "number of tags" score is awarded 4 points.³¹

3、这首歌用到了什么乐器和音效?包括电子音、现实世界音效采样等(如对白、集市环境音、汽车、铃声、雨声等)

配器与音效：

请输入分数

12分，其中标签数1-5对应1-5分，最多5分；标签准确性0-3对应0-3分，最多3分；一句话描述中准确性0-2分，细致程度0-2分（如具体到哪个段落用了哪个音色）。

钢琴

吉他

贝斯

鼓组

▼

这首歌曲由钢琴、吉他、贝斯、鼓组来完成的。

21 / 300

Supplementary Figure 31. The scoring rubric for the "Instrumentation" question.

- **Questions 6, 7, 8 (Use Case, Culture, Audience):** These questions are given an initial score of 4 points, which is then adjusted by the inspector based on the quality of the answer.

6、这首歌是否可以用于包括但不限于以下用途：助眠、运动、节日庆典、生日、婚礼、葬礼、校歌、企业歌曲、表白、宗教等？

歌曲用途：

请输入分数

6分，准确性3分，创造力3分。

分手

▼

我认为这首歌曲的风格适合经历了分手的人来收听。

23 / 300

7、这首歌是否包含、或让你联想到一些文化与地域的背景？如传统音乐、民族音乐、地区文化、宗教信仰、历史背景等。

文化与地域：

请输入分数

6分，准确性3分，创造力3分。

没有地域文化特点

▼

我认为这首歌曲是没有明显的地域文化特点的。

21 / 300

8、这首歌是否有明确的年龄特征？适合或者不适合某些人群

适用人群：

请输入分数

6分，准确性3分，创造力3分。

中年人

▼

我认为这首歌曲的风格很适合中年人来收听。

20 / 300

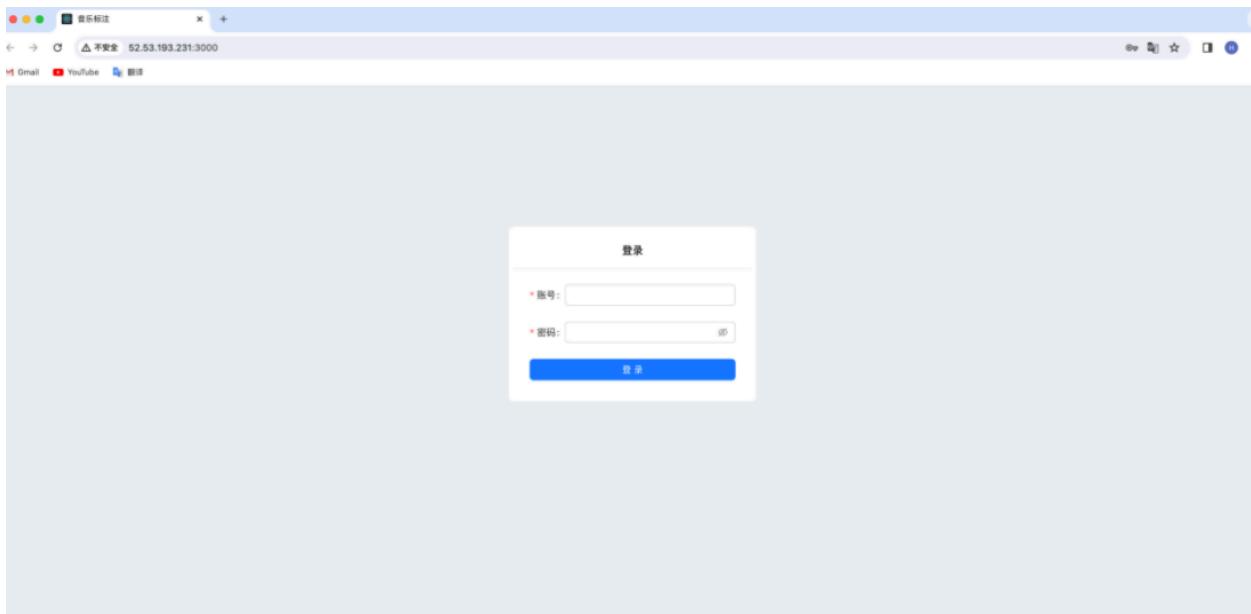
Supplementary Figure 32. Examples of the QC interface for questions 6, 7, and 8.

5. Song Annotation (Professional Group)

This section details the procedures for Professional Group annotators focusing on in-depth musical analysis and tagging.

5.1. Annotator Interface

The login and dashboard interface are identical to the Amateur Group (see Sections 3.1 and 3.2), but the tasks are for professional-level analysis.

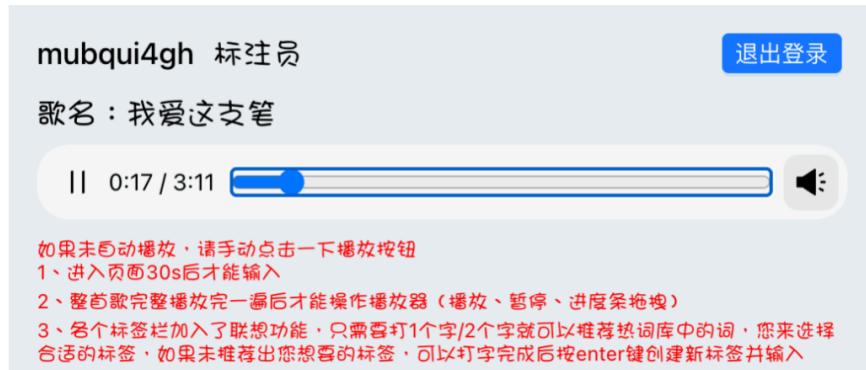


Supplementary Figure 33. The login page.

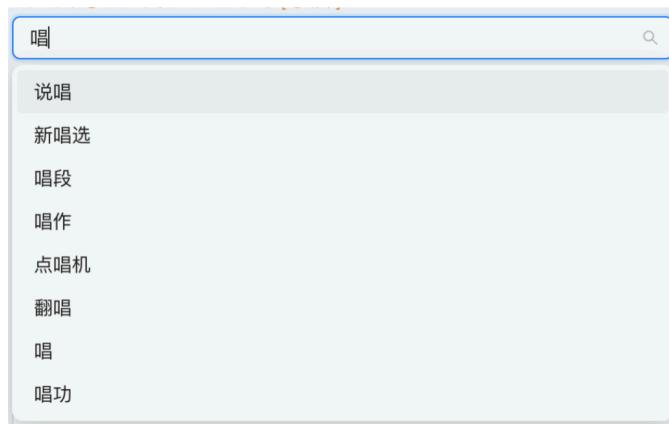
A screenshot of a web-based dashboard. On the left, there is a vertical list of song titles and their corresponding annotation status. On the right, there is a vertical column of blue buttons, each labeled with a single character '曲' (Song).

歌曲名	状态
mubqui4gh 标注员	退出登录
我爱这支笔	曲
qq_334622164	曲
指环	曲
回不去挥不去	曲
我爱煮东山和水	曲
qq_372781952	曲
可爱最爱	曲
一列绿皮.	曲
qq_396257868	曲
qq_331351359	曲
我的思念	曲
远航	曲
侬本痴情	曲
爱恨难	曲
爱与被爱都幸福	曲

Supplementary Figure 34. The main dashboard for a Professional Group song annotator.



Supplementary Figure 35. Entry into the Professional Group song annotation interface.



Supplementary Figure 36. An example of the tag input field.

5.2. Annotation Questions

There are eleven questions for the professional group.³³

1. **Overall Feeling:** Describe the song's feeling from two perspectives, plus a written description of at least 50 characters.³⁴
 - **Expressive Feeling (Vocals & Accompaniment):** (e.g., "Heartfelt," "Powerful").
 - **Emotional Feeling (Lyrics & Melody):** (e.g., "Joyful," "Melancholy").
 -

1、这首歌带给你的感受？

表现力感受（歌手和伴奏）：

请选择或输入至少3个标签

情绪感受（歌词和旋律）：

请选择或输入至少3个标签

描述：

请输入至少50字的描述

0 / 300

- - **Supplementary Figure 37. The "Overall Feeling" question for the Professional Group.**
 -
2. **Lyrics and Theme:** Similar to the amateur task, the description is pre-generated. The annotator must add at least three tags and verify/edit the text. 35

2、这首歌的歌词风格？结合歌词内容和音乐对整首歌的主题进行简单总结？

歌词和主题内容：

请选择或输入至少3个标签

这首歌以温暖的烛光和柔软的气氛开篇，描述了一段感情的终结。歌曲通过描绘舞蹈和幸福时光，表达了失落和孤独的心情。主题围绕着爱情的离别和放手，以及对前任恋人的祝福和祝福的微笑。整首歌曲风格抒情，旋律柔和，歌词深情而深沉。

Supplementary Figure 38. The "Lyrics and Theme" question for the Professional Group.

3. **Instrumentation and Sound Effects:** Similar to the amateur task, but requires a higher degree of accuracy in identifying all instruments. 36

3、这首歌用到了什么乐器和音效?包括电子音、现实世界音效采样等(如对白、集市环境音、汽车、铃声、雨声等)

配器与音效：

*只需把自己能分辨出来的写出即可，不用担心对错。

请选择或输入至少3个标签

▼

请输入至少20字的描述

0 / 300

Supplementary Figure 39. The "Instrumentation" question for the Professional Group.

4. Genre or Style: Identify the song's specific genre (e.g., Jazz, Funk, Future Bass). If it is a pop song with no dominant genre, describe its stylistic elements (e.g., "Chinese Style," "R&B"). Requires at least 3 tags and a 20-character description. 37

4、这首歌属于什么经典的风格或流派吗？或者作为流行歌，歌曲里融入了怎样的元素？

风格或流派：

*不用太严格，给出你能认定的风格就好，如[后摇]完全可以写成[摇滚]，[future bass]可以写成[EDM]等。若歌曲是无明显风格的流行歌，可以写你能听到的歌曲中的风格元素，如[中国风] [R&B]等。

请选择或输入至少3个标签

▼

请输入至少20字的描述

0 / 300

Supplementary Figure 40. The "Genre or Style" question.

5. Tempo and Rhythm: Describe the song's notable characteristics regarding tempo, time signature, or rhythm. Focus on impactful features rather than specific BPM. 38

5、这首歌的速度和节奏如何？

速度与节奏：

*速度不用太严谨，写你的感受即可；节奏比如最近热歌《青花瓷》，旋律有很明显的反拍。如节奏无明显特点，即写无明显特点。

请选择或输入至少3个标签

▼

请输入至少20字的描述

0 / 300

Supplementary Figure 41. The "Tempo and Rhythm" question.

6. Vocals and Singing: Similar to the amateur task, but with higher expectations for detail.
39

6、这首歌的人声有什么特点
歌唱和人声：
*还有如[美声] [男高音] [男女对唱] [童声合唱] [电音] [说唱] [阿卡贝拉] [电话音] [嘻哈]等。
请选择或输入至少3个标签

请输入至少20字的描述

0 / 300



Supplementary Figure 42. The "Vocals and Singing" question.

7. Sound Quality: Same as the amateur task (see Question 5 in Section 3.3). 40

7、这首歌的音质怎么样？是否是现场版？是否是Lo-Fi或有其它低音质效果？
音质：
 清晰 不清晰

现场版：
如果选择“是”，请输入至少7字描述
 是 否

Lo-Fi：
*低保真，类似磁带效果
如果选择“是”，请输入至少7字描述
 是 否



Supplementary Figure 43. The "Sound Quality" question group.

8. Song Use Case: Same as the amateur task (see Question 6 in Section 3.3).

8、这首歌是否可以用于包括但不限于以下用途：助眠、运动、节日庆典、生日、婚礼、葬礼、校歌、企业歌曲、表白、宗教等？

歌曲用途：

*尽量思考下各种神奇用途，如果你拿到这个音乐可以用来做什么，越多越好，比如给家人亲人、讽刺吐槽什么人、骑车、写作业。。

请选择或输入至少3个标签

请输入至少15字的描述

0 / 300

9. **Cultural and Regional Context:** Same as the amateur task (see Question 7 in Section 3.3).

9、这首歌是否包含一些文化与地域的背景？如传统音乐、民族音乐、地区文化、宗教信仰、历史背景等。

文化与地域：

*如[日本] [中东] [新疆] [黑人] [南美洲] [基督教] [巴洛克] [没有地域文化特点]等。

请选择或输入至少3个标签

请输入至少15字的描述

0 / 300

10. Target Audience: Same as the amateur task (see Question 8 in Section 3.3). 43

10、这首歌是否有明确的年龄特征？适合或者不适合某些人群

适用人群：

如可爱儿歌适合[儿童]，广场舞曲/夕阳红歌曲适合[中老年人]，奋发向上的歌曲适合[少年]，色情欲望相关的不适合[儿童][少年]

请选择或输入至少3个标签

请输入至少15字的描述

0 / 300

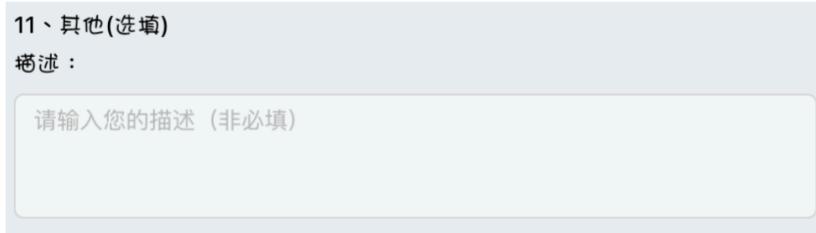
Supplementary Figure 44. Questions for "Use Case," "Culture," and "Audience."

11. Other (Optional): Same as the amateur task (see Question 9 in Section 3.3). 44

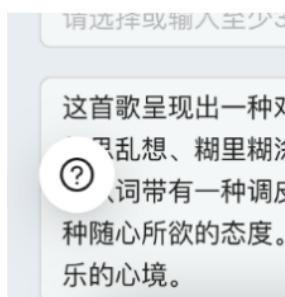
11、其他(选填)

描述：

请输入您的描述 (非必填)



Supplementary Figure 45. The "Other" question.
The "Suspend" function is also available (see Section 1.4).



Supplementary Figure 46. The song annotation interface.



Supplementary Figure 47. The dialog box for suspending a task.

6. Quality Control (QC) for Professional Song Annotation

This section outlines the workflow for QC Inspectors who review the work of Professional Group song annotators.

6.1. QC Inspector Interface and Scoring

The interface is similar to the QC for the amateur group. Tasks are drawn from professional song annotators.⁴⁵

mubzCjk8 质检员	退出登录
qq_382773389(专业)	曲
qq_104775877(专业)	曲
qq_278474390(专业)	曲
qq_337469093(专业)	曲
qq_376777347(专业)	曲
挥卫生命(专业)	曲
别中了情歌的毒(专业)	曲
同是青春追梦人【live】(专业)	曲
伤新情(专业)	曲
qq_339772571(专业)	曲
42长安(专业)	曲
西安爱情故事(专业)	曲
小燕子(专业)	曲
qq_333192109(专业)	曲
bling bling(专业)	曲
奈何两字拉成桥(专业)	曲
qq_317927446(专业)	曲
qq_722060(专业)	曲
qq_324008601(专业)	曲
qq_324754450(专业)	曲

Supplementary Figure 48. The QC Inspector's task list for Professional Group submissions.

The inspector listens to the song and scores the submission. The "Innovation" score defaults to half of the maximum, rounded down, and is then adjusted.

mubzCjk8 质检员 退出登录

歌名 : qq_382773389

|| 0:06 / 3:47 音量 :

1、这首歌带给你的感受？

表现力感受（歌手和伴奏）：请输入分数

13分，其中标签数1-4对应1-4分，最多4分；准确性0-4分，多个无效标签可酌情减分；创新性0-5分。

强 递进 张力强 ▼

情绪感受（歌词和旋律）：请输入分数

13分，其中标签数1-4对应1-4分，最多4分；准确性0-4分，多个无效标签可酌情减分；创新性0-5分。

愉悦 欢快 鼓舞 ▼

描述：请输入分数

8分 准确性3分+创新性5分。

这首歌给人以激扬的振奋，告诉我们即使身处低谷也要仰望星空，勇往前行，就像歌词写的那样“当我迷失它会照我前行”

54 / 300

Supplementary Figure 49. The QC scoring interface for Professional submissions.

- **Question 3 (Instrumentation):** If a song has fewer than four instruments and the annotator correctly identifies all, the tag score is 4 points.

3、这首歌用到了什么乐器和音效?包括电子音、现实世界音效采样等（如对白、集市环境音、汽车、铃声、雨声等）

配器与音效：请输入分数

12分，其中标签数1-5对应1-5分，最多5分；标签准确性0-3对应0-3分，最多3分；一句话描述中准确性0-2分，细致程度0-2分（如具体到哪个段落用了哪个音色）。

架子鼓 贝斯 电吉他 ▼

主歌和副歌用了贝斯，架子鼓，间奏用到了电吉他

22 / 300

- **Supplementary Figure 50. The scoring rubric for the "Instrumentation" question.**

- **Question 4 (Genre):** 4 points are awarded if all genre tags are correct. The description starts at 1 point and is adjusted based on detail.

4、这首歌属于什么经典的风格或流派吗？或者作为流行歌，歌曲里融入了怎样的元素？

风格或流派：

请输入分数

8分 风格判断合理即可，描述越详细分数越高

摇滚 流行 无

这首歌曲是一首摇滚音乐，里面有一些流行元素

21 / 300

Supplementary Figure 51. The scoring rubric for the "Genre" question.

- **Question 5 (Tempo/Rhythm):** A base score of 3 is given for a reasonable answer, with points added for using precise and innovative terminology.

5、这首歌的速度和节奏如何？

速度与节奏：

请输入分数

5分 速度与节奏判断合理即可，可视专业词汇精准程度加分。

快 无 无明显特点

这首歌曲速度较快，节奏律动没有明显特点。

20 / 300

Supplementary Figure 52. The scoring rubric for the "Tempo/Rhythm" question.

- **Questions 8, 9, 10 (Use Case, Culture, Audience):** These start with a base score of 4, which is then adjusted.

8、这首歌是否可以用于包括但不限于以下用途：助眠、运动、节日庆典、生日、婚礼、葬礼、校歌、企业歌曲、表白、宗教等？

歌曲用途：

请输入分数

6分，准确性3分，创造力3分。

运动

活动

晚会

▼

这首歌曲适用于运动，活动，晚会

15 / 300

9、这首歌是否包含一些文化与地域的背景？如传统音乐、民族音乐、地区文化、宗教信仰、历史背景等。

文化与地域：

请输入分数

^

▼

6分，准确性3分，创造力3分。

无

无

无地域文化特点

▼

这首歌曲没有明显地域文化特点。

15 / 300

10、这首歌是否有明确的年龄特征？适合或者不适合某些人群

适用人群：

请输入分数

6分，准确性3分，创造力3分。

少年

无

无

▼

这首歌曲适用于少年，富有奋发向上

16 / 300

● Supplementary Figure 53. The QC interface for questions 8, 9, and 10.

7. Backend Accounting Interface

This section describes the administrative backend for managing users, tracking progress, and processing financial settlements.

7.1. User Login

Access to the backend requires a specific URL and a one-time modification of the computer's hosts file.

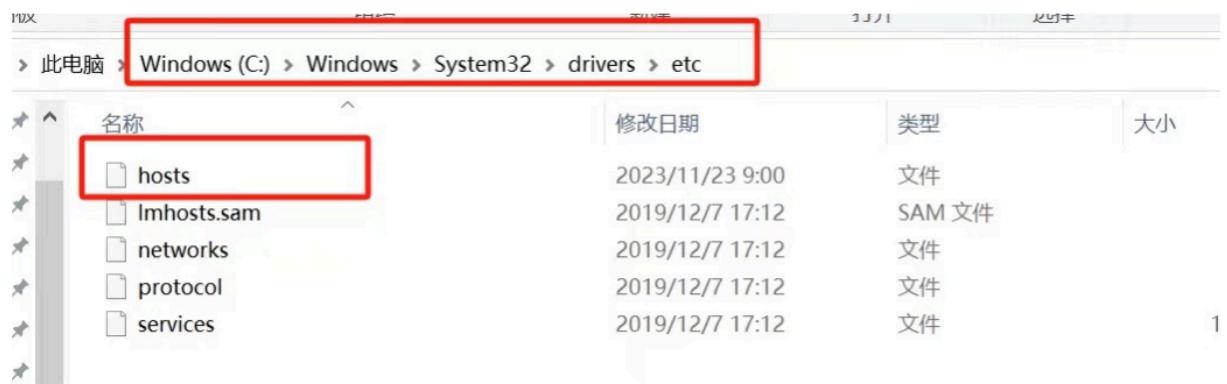
URL: http://manager.m.ai:8310/admin/login/index?sess_is_expire=1

7.1.1. Modifying the hosts File

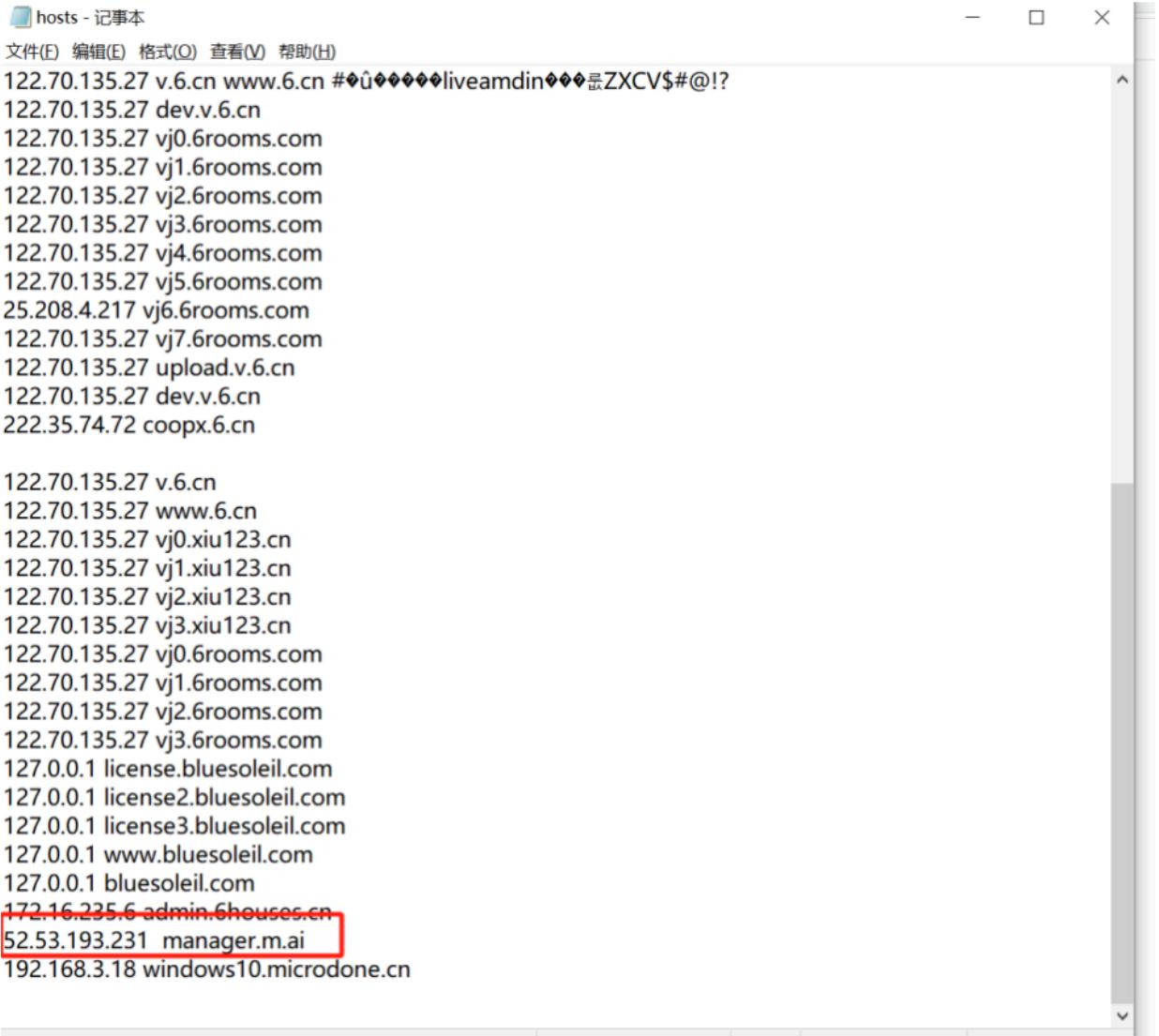
First, add the following line to your system's hosts file:

52.53.193.231 manager.m.ai 51

- For Windows: The hosts file is located at C:\Windows\System32\drivers\etc.



Supplementary Figure 54. Windows File Explorer showing the path to the hosts file.



A screenshot of a Windows Notepad window titled "hosts - 记事本". The window contains a list of IP addresses and domain names. A red box highlights the last two lines of the file:

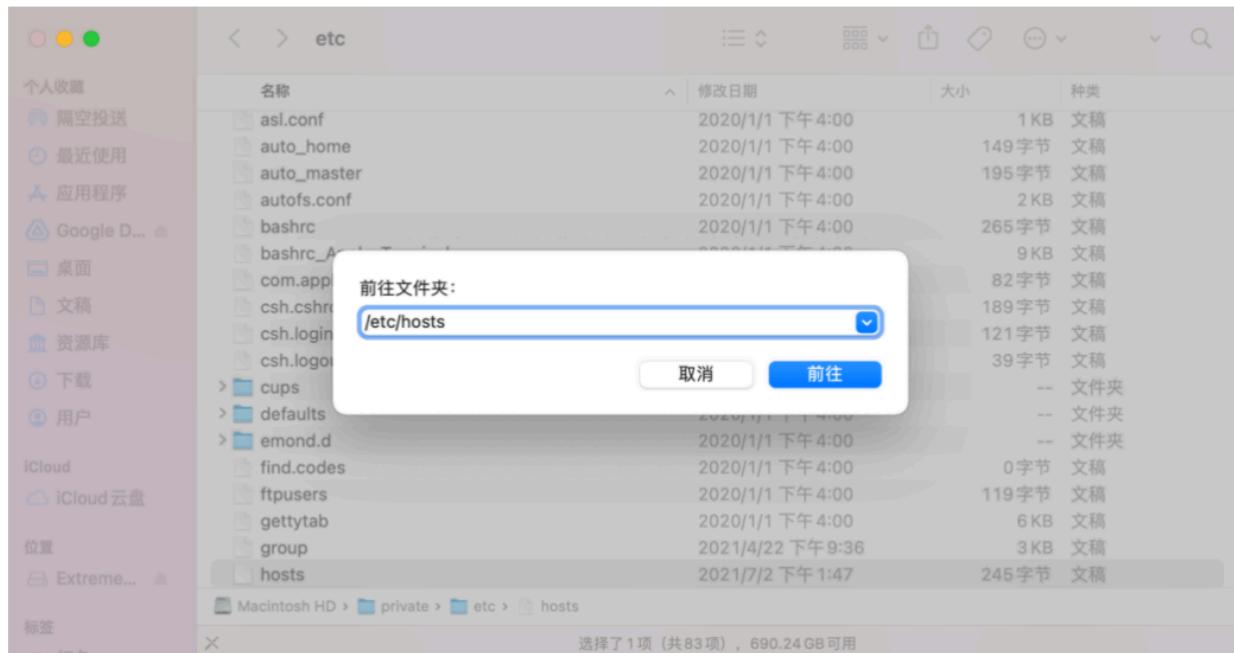
```
122.70.135.27 v.6.cn #♦û♦♦♦♦♦liveamdin♦♦♦最ZXCV$#@!?
122.70.135.27 dev.v.6.cn
122.70.135.27 vj0.6rooms.com
122.70.135.27 vj1.6rooms.com
122.70.135.27 vj2.6rooms.com
122.70.135.27 vj3.6rooms.com
122.70.135.27 vj4.6rooms.com
122.70.135.27 vj5.6rooms.com
25.208.4.217 vj6.6rooms.com
122.70.135.27 vj7.6rooms.com
122.70.135.27 upload.v.6.cn
122.70.135.27 dev.v.6.cn
222.35.74.72 coopx.6.cn

122.70.135.27 v.6.cn
122.70.135.27 www.6.cn
122.70.135.27 vj0.xiu123.cn
122.70.135.27 vj1.xiu123.cn
122.70.135.27 vj2.xiu123.cn
122.70.135.27 vj3.xiu123.cn
122.70.135.27 vj0.6rooms.com
122.70.135.27 vj1.6rooms.com
122.70.135.27 vj2.6rooms.com
122.70.135.27 vj3.6rooms.com
127.0.0.1 license.bluesoleil.com
127.0.0.1 license2.bluesoleil.com
127.0.0.1 license3.bluesoleil.com
127.0.0.1 www.bluesoleil.com
127.0.0.1 bluesoleil.com
172.16.225.6 admin.6houses.cn
52.53.193.231 manager.m.ai
192.168.3.18 windows10.microdone.cn
```

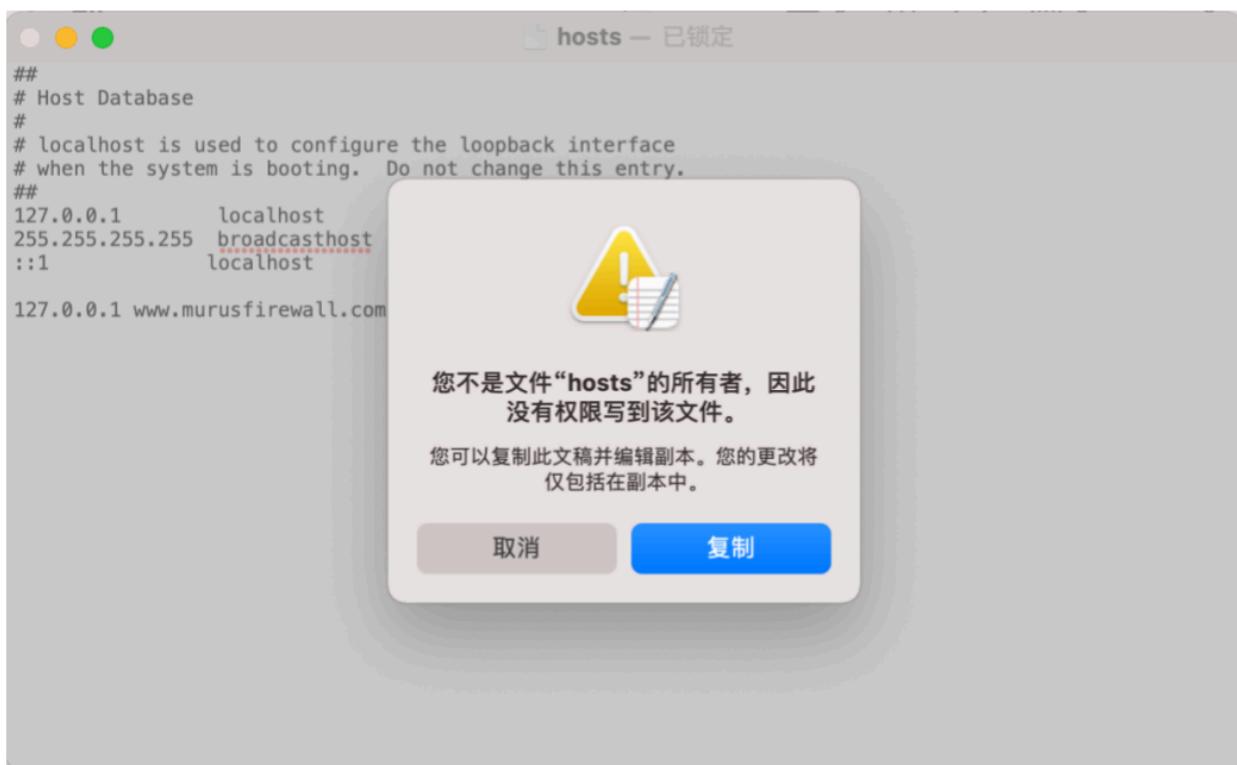
Supplementary Figure 55. The hosts file opened in Notepad with the required line added.

- **For macOS:**

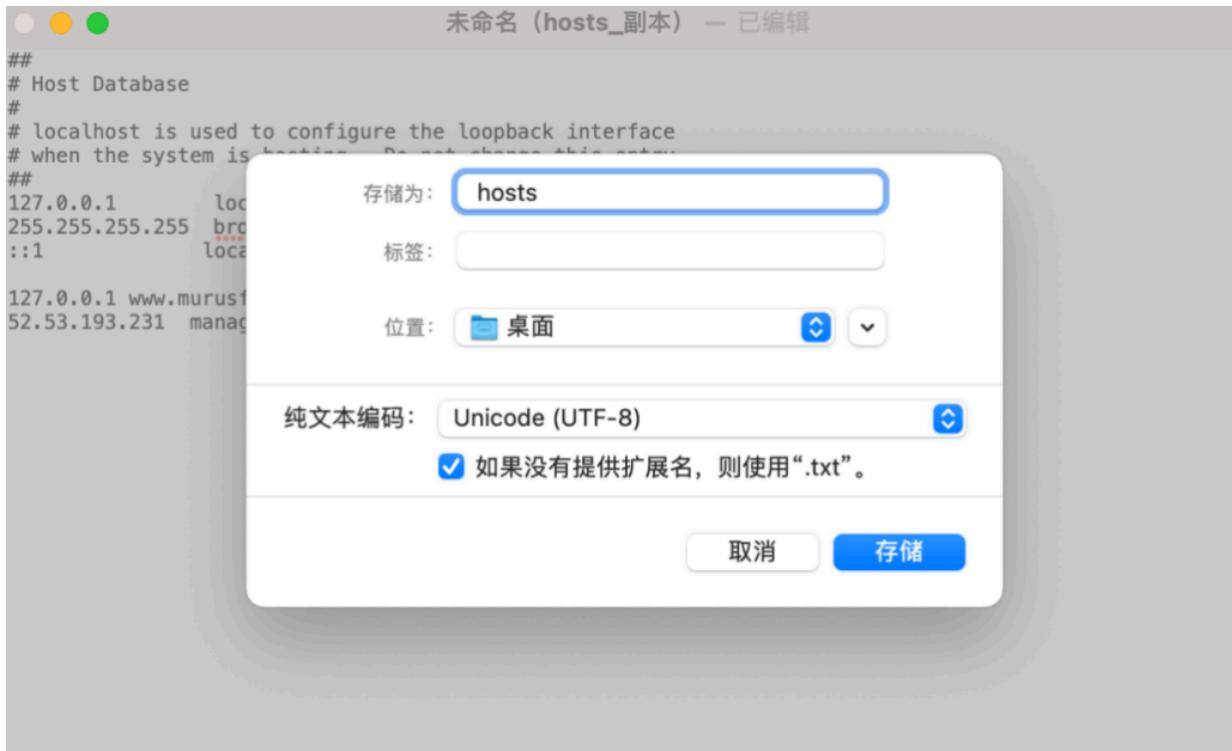
1. Open Finder and use the "Go to Folder" command (Shift+Command+G). Enter /etc/hosts.⁵²
2. The file is locked. Copy it to your desktop to create an editable duplicate.⁵³
3. Add the required line to the duplicate file and save it as hosts (ensure it does not have a .txt extension).⁵⁴
4. Move this new hosts file back to the /etc/ directory, replacing the original. You will be prompted for your password.⁵⁵



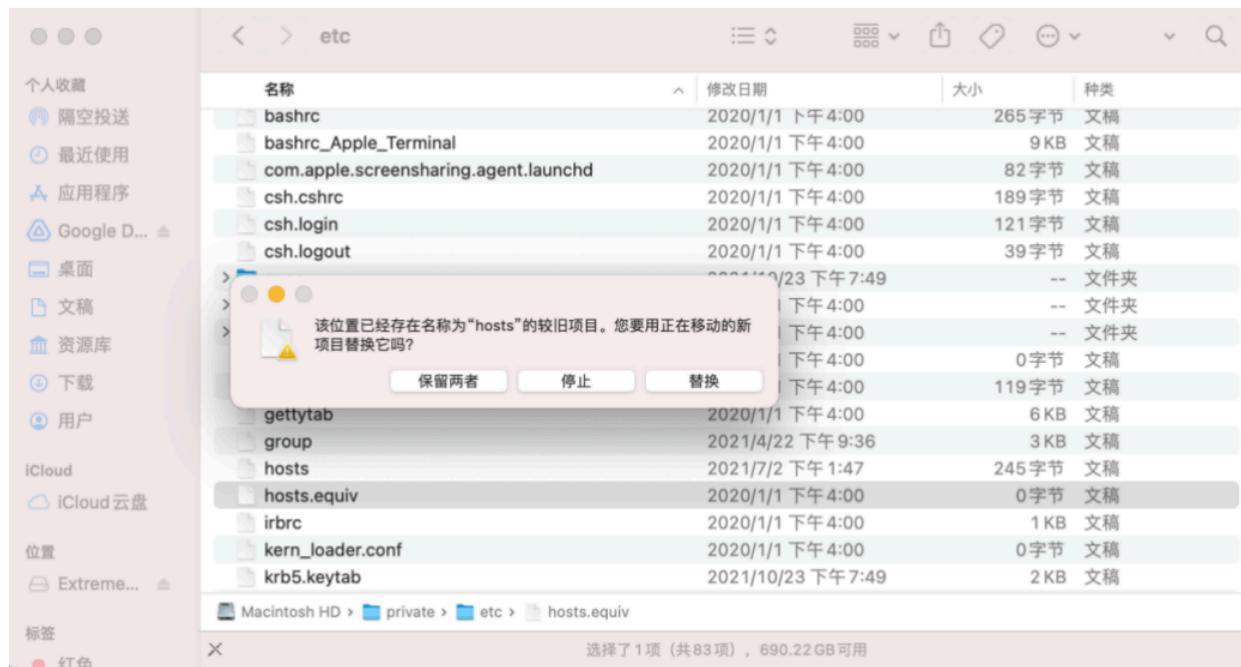
Supplementary Figure 56. macOS Finder "Go to Folder" dialog.



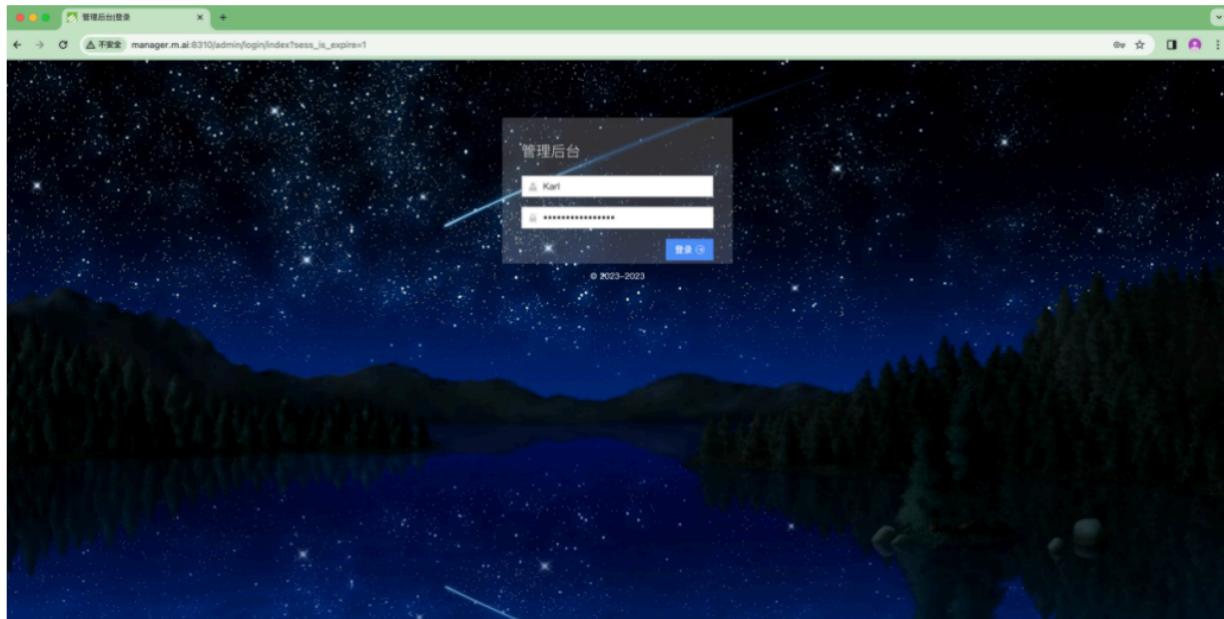
Supplementary Figure 57. macOS warning that the hosts file is locked.



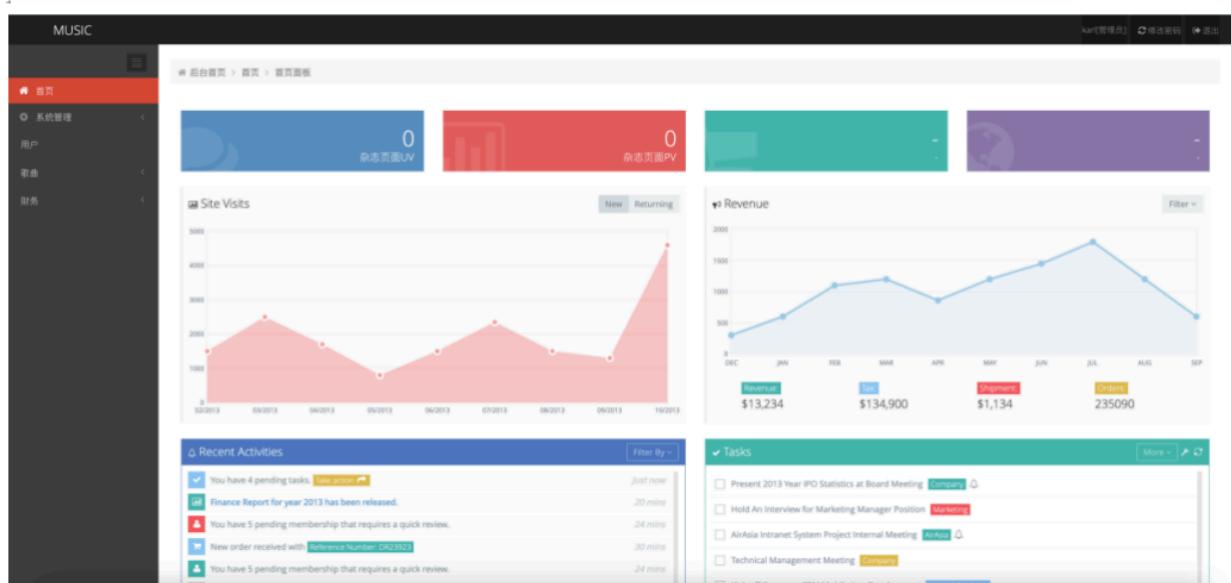
Supplementary Figure 58. Saving the modified hosts file from a copy.



Supplementary Figure 59. macOS dialog for replacing the existing hosts file.
After modifying the hosts file, navigate to the URL and log in with an administrator account.



The login screen for the backend management platform.



Supplementary Figure 61. The main dashboard of the backend platform.

7.2. User Management

The "User" (用户) tab is for adding and removing user accounts. Click "+Add" (添加) to create a new user, defining their username, password, annotation type (lyrics or song), role (annotator, QC, admin), and task claiming permissions.

用户					
	名	词曲标注	身份	无限任务	操作
0b250572e3e44a019d7f4681743c7ee	mubsp287	曲	质检员	不能	编辑 禁用
0b7cuae354140d88ef5ad4ff1388e4	mubsp546h	曲	专业标注	能	编辑 禁用
0ea17e1d594f4545da8696a4943c3806	mubsp541h	曲	普通标注	能	编辑 禁用
11811c0ba7d54e8bb8e518dd6829e29bd	mubsp9t0h	曲	普通标注	能	编辑 禁用
1408399661a24c39f1b36c9b52d29d	mubspw5h	曲	专业标注	能	编辑 禁用
1afed7e2ab284a02b5253d1384e32697	mubspch36	词	质检员	不能	编辑 禁用
1df12d729e7b4ef2afe1ff17303d6	mubspctu	词	质检员	不能	编辑 禁用
1e431504e850451a0b16777e0d996541	mubspAb4M	曲	质检员	能	编辑 禁用
2203b30cced1748ab0a1e34848310368d	mubspqvtjh	曲	专业标注	能	编辑 禁用
22bf04ce8274489c8f85850448b153c6a	mubspq7Th	曲	普通标注	能	编辑 禁用
236ef7b0bd61d184b628ec24613f93c016	mubspfollow	词	质检员	不能	编辑 禁用
24785497540940heatfe9951fba7f6ab	mubspenAb	曲	普通标注	能	编辑 禁用
250f53797ce44693882bc932cf871a5	mubspjTR5h	曲	普通标注	能	编辑 禁用
25b47febech14e45a2b55d864x9059d8	mubspqvtwh	曲	专业标注	能	编辑 禁用
26d703685224a466fe950d684fc5d39a	mubspKgJvh	曲	普通标注	能	编辑 禁用
2a6aff1ab960d401199e89221f1932d8c3	mubspqf1h	曲	专业标注	能	编辑 禁用
2c1924fa25c6484ef9e81916821473aa	mubspqCnh	曲	普通标注	能	编辑 禁用
3175237de5ca4c0894ac25c1815dab8	mubspqS5Nh	曲	普通标注	能	编辑 禁用
338ae0e76e74d4abfe02042d134ecd	mubspqPQkh	曲	普通标注	能	编辑 禁用
353af12d5ff5464e87d148feab57837	mubspmint	词	质检员	不能	编辑 禁用
354207fe5c60495028586c7a8571d52	mubspqCosh	曲	普通标注	能	编辑 禁用

Supplementary Figure 62. The user management list.



Supplementary Figure 63. The "Add User" dialog box with fields for role and permissions.

Usernames follow a specific convention to denote their role and status.

7.3. Song Progress Management

The "Song" (歌曲) tab is used to monitor the progress of annotation and QC tasks. You can filter by task type (e.g., "Song QC" - 曲质检) and status ("Pending" - 未完成) to see the current workload.

The left side shows a navigation menu with a sidebar for '歌曲' (Song) containing '歌曲', '词标注', '词质检', '曲标注', and '曲质检'. The right side shows a list of lyrics annotations with columns for Id, userId, musicId, and content.

Id	userId	musicId	content
26853	411980d224594ead91 d9ebe1884523e2	fff3c842 1a7963e	
26852	411980d224594ead91 d9ebe1884523e2	06cf798 c11c9e8	
26851	411980d224594ead91 d9ebe1884523e2	05feed7 bc9a691	
26850	411980d224594ead91 d9ebe1884523e2	05f42bc 8a19f87	

Supplementary Figure 64. The navigation menu for the "Song" section.

The left side shows a navigation menu with a sidebar for '曲质检' (Song Quality Check). The right side shows a progress tracking table with a red box highlighting the '是否专业' (Is Professional) and '完成状态' (Completion Status) filters.

ID	userId	musicId	曲id	是否专业	完成状态	完成时间	操作
791		0958b5528a004c348 4ed7cbd250a05e1	4018	专业	未完成	2023-12-29 00:03:12	-
790		34bc9bc0370e40aaa8 a263a2bd68ee19	4178	专业	未完成	2023-12-29 00:03:12	-
789		0c9b2cac8a10459181 b6350c7df3ff1f	4008	专业	未完成	2023-12-29 00:03:12	-
788		24728abac6894a8284 8bc7f978cd3115	3998	专业	未完成	2023-12-29 00:03:12	-
787		fd4286dbe7ef461b81 ad3ea039c7ccb2	3988	专业	未完成	2023-12-29 00:03:12	-
786		340620fd3ec4a49a0 ba70188ae1557	3940	专业	未完成	2023-12-29 00:03:12	-
783		1087d730a57641ae9 e1ceb6c13c3bdd4	3966	专业	未完成	2023-12-29 00:03:12	-
781		65b4bx230e844ae8 12165de5c819f9f	3948	专业	未完成	2023-12-29 00:03:12	-

Supplementary Figure 65. The progress tracking view for "Song QC," showing a filter for pending tasks.

7.4. Financial Settlement

The "Finance" (财务) tab is used for calculating payments for annotators and inspectors.

首页

系统管理

用户

歌曲

财务

- 标注结算
- 质检结算
- 结算记录
- 曲标注结算特殊
- 曲结算

第	<
userId	
ffff2b3d	
de59db	
fd04d20	
4537f5f	
f960506	
c314751	
f73c66e	
f5f5121	
...	

Supplementary Figure 66. The navigation menu for the "Finance" section.

- Lyric Annotation/QC Settlement:** Payments are based on the final status of each annotation (Correct, Incorrect, Skipped, Exempted), with different rates for each.
- Song Annotation Settlement:** Payments are based on a base rate adjusted by a quality score. QC Inspectors periodically sample an annotator's work and assign a grade (A, B, C, D), which corresponds to a payment multiplier (130%, 100%, 70%, 70% respectively). Annotators who receive a D grade are not assigned further tasks.

userId	name	对的(2.8)	错需要标(0.28)	错需要跳过(0.1)	跳免(0.4*2.8)	跳过对(0.1)	跳过错(0)	数据	金额	操作
		-	-	-	-	-	-	-	-	<input type="button" value="Q搜索"/> <input type="button" value="重置"/>

userId	name	标的对(0.5*2.8)	跳免重新标(0.8*2.8)	都跳重新标(1.2*2.8)	有标重新标(1.3*2.8)	都跳结果跳(0.1)	有标结果跳(0.2)	金额	操作
		-	-	-	-	-	-	-	<input type="button" value="Q搜索"/> <input type="button" value="重置"/>

userId	name	身份	数量	质检数量	质检平均分	金额	操作
		-	-	-	-	-	<input type="button" value="Q搜索"/> <input type="button" value="重置"/>

Supplementary Figure 67. The three main settlement views for lyric annotation, lyric QC, and song annotation.

7.4.1. Settlement Process

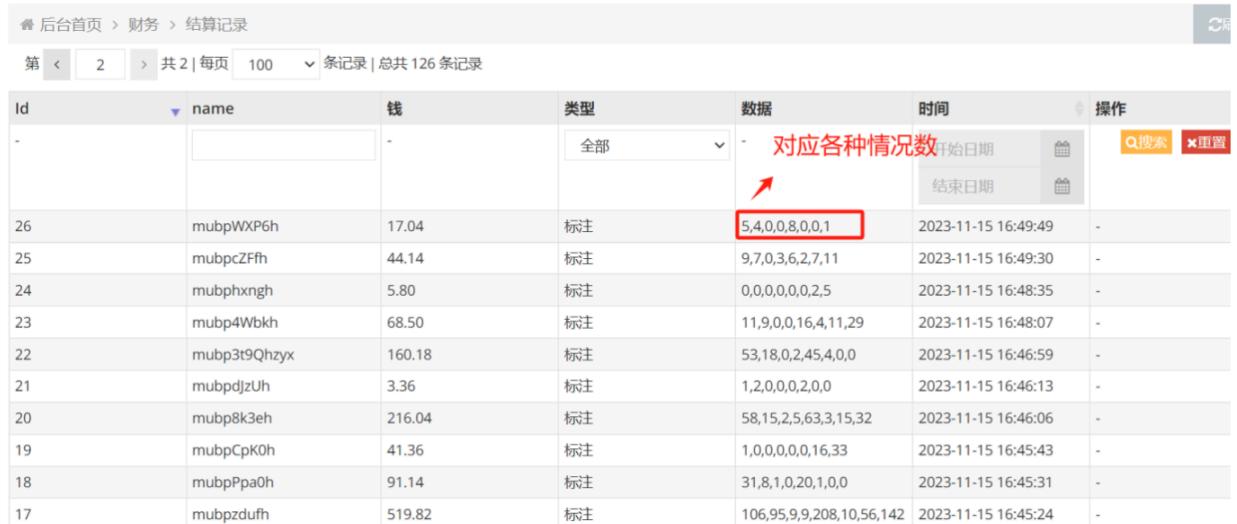
- Musical Phrase (Lyric) Settlement:** The "Annotation Settlement" (标注结算) page shows pending payments. Clicking "Settle" (结算) moves the data to the "Settlement Records" (结算记录) page.



The screenshot shows a table titled '乐段标注-点结算后本页面数据清空, 数据到结算记录' (After point settlement, this page's data is cleared, data is moved to the Settlement Record page). The table has columns: userId, name, 对的(2.8), 错需要标(0.28), 错需要跳过(0.1), 跳免(0.4*2.8), 跳过对(0.1), 跳过错(0), 数据, 金额, 操作. There are four rows of data, each with a red 'Settle' button in the '操作' column. A red arrow points from the text above to the first row's '操作' column.

userId	name	对的(2.8)	错需要标(0.28)	错需要跳过(0.1)	跳免(0.4*2.8)	跳过对(0.1)	跳过错(0)	数据	金额	操作
fff2b3d221384dcdbf2de59db188174	mubpSN5ch	2	5	0	M:5 T:0	M:8 T:0	0	跳过和标注: 492 已结算: 472 本次结算: 20	13.40	<button>直接结算</button>
fd04d20e30854668aa4537f59db2e1d8	mubpzonnm	0	0	0	M:20 T:0	M:0 T:0	0	跳过和标注: 20 已结算: 0 本次结算: 20	22.40	<button>直接结算</button>
f96050674a4e47719fc31475c8bd9c9	mubp91Pth	15	9	1	M:4 T:0	M:6 T:0	8	跳过和标注: 237 已结算: 194 本次结算: 43	49.70	<button>直接结算</button>
f73c666b6ef3454914f5f512170b7ea	mubpKwZ3hz	16	10	0	M:0 T:0	M:3 T:0	2	跳过和标注: 35 已结算: 4 本次结算: 31	47.90	<button>直接结算</button>

Supplementary Figure 68. The lyric annotation settlement page



The screenshot shows a table titled '对应各种情况数' (Corresponding to various situations). The table has columns: Id, name, 钱, 类型, 数据, 时间, 操作. A red arrow points from the text above to the '数据' column of the first row. The '数据' column contains the value '5,4,0,0,8,0,0,1' which is highlighted with a red box.

Id	name	钱	类型	数据	时间	操作
-		-	全部	5,4,0,0,8,0,0,1	开始日期 结束日期	<button>搜索</button> <button>重置</button>
26	mubpWXP6h	17.04	标注	9,7,0,3,6,2,7,11	2023-11-15 16:49:49	-
25	mubpcZFfh	44.14	标注	0,0,0,0,0,0,2,5	2023-11-15 16:49:30	-
24	mubphxng	5.80	标注	11,9,0,0,16,4,11,29	2023-11-15 16:48:35	-
23	mubp4Wbk	68.50	标注	53,18,0,2,45,4,0,0	2023-11-15 16:48:07	-
22	mubp3t9Qhzyx	160.18	标注	1,2,0,0,0,2,0,0	2023-11-15 16:46:59	-
21	mubpdjzUh	3.36	标注	58,15,2,5,63,3,15,32	2023-11-15 16:46:06	-
20	mubp8k3eh	216.04	标注	1,0,0,0,0,16,33	2023-11-15 16:45:43	-
19	mubpCpK0h	41.36	标注	31,8,1,0,20,1,0,0	2023-11-15 16:45:31	-
18	mubpPpa0h	91.14	标注	106,95,9,9,208,10,56,142	2023-11-15 16:45:24	-
17	mubpzdufh	519.82	标注			-

Supplementary Figure 69. The settlement records page, showing historical payment data.

- Musical Phrase (Lyric) QC Settlement:** This process is similar to the annotation settlement, with its own interface for pending payments and records.

userId	name	标的对 (0.5*2.8)	豁免重新标 (0.8*2.8.)	都跳重新标 (1.2*2.8)	有标重新标 (1.3*2.8)	都跳结果跳 (0.1)	有标结果跳 (0.2)	金额	操作
bb55104129224	mubztnac	0	0	0	1	0	0	3.64	<button>结算</button>
a9b2e2479eeff441	mubzjdn	1	1	0	0	1	0	3.74	<button>结算</button>
9c65509fcbd24ff	mubsVcSz	4	1	0	3	3	4	19.86	<button>结算</button>

Supplementary Figure 70. The lyric QC settlement page.

Id	name	钱	类型	数据	时间
151	mubz29j7	44.72	质检	8,2,1,7,2,0	2023-12-13 10:43:47
150	mubzfb8w	44.20	质检	5,0,10,4,2	2023-12-13 10:43:43
149	mubzrlmt	39.36	质检	12,8,0,1,6,2	2023-12-13 10:43:40
148	mubzrpwk	24.60	质检	4,0,0,5,2,3	2023-12-13 10:43:34
147	mubzq5b2	9.34	质检	4,0,0,1,1,0	2023-12-13 10:43:23
146	mubzgfh9q	51.02	质检	28,0,0,3,1,4	2023-12-13 10:43:15
145	mubzrj53	111.70	质检	66,0,0,5,7,2	2023-12-13 10:43:14
144	mubzw70	534.72	质检	245,9,0,44,54,30	2023-12-13 10:43:13

Supplementary Figure 71. The settlement records for QC tasks.

- **Song Annotation Settlement:** The "Song Settlement" (曲结算) page shows the quantity of work and average quality score. Clicking "Settle" (结算) opens a dialog to input the final price-per-unit based on the quality grade. This is then moved to the settlement records.

userId	name	身份	数量	质检数量	质检平均分	操作
fe5201a2c42f4f36add92	mubqfgj9h	专业	22	4	73.00	<button>结算</button>
a9e07f89ce0	mubqYMG6h	非专业	14	0	0	<button>结算</button>
d665480537a74b08aa3f	mubqRQWh	非专业	20	0	0	<button>结算</button>
4d659f4bec10	mubqshu2h	专业	3	0	0	<button>结算</button>
d3ccdd5b4f14234a27af	mubqn3dfh	专业	1	0	0	<button>结算</button>
75f286bbdad	mubqcv5Dh	专业	1	0	0	<button>结算</button>
a80a55863796449db172	mubqerth	专业	1	0	0	<button>结算</button>
d18b3bda7001	mubq4serh	专业	5	1	74.00	<button>结算</button>
597a935e899c4f759243e						
fe3f66528be						

Supplementary Figure 72. The song annotation settlement page.



Supplementary Figure 73. The dialog box for entering the unit price for song annotation settlement.

后台首页 > 财务 > 结算记录						
第	<	1	>	共 2 每页 100	条记录 总共 126 条记录	刷新
ID	name	钱	类型	数据	时间	操作
163	mubqp7TFh	3,549.60	曲标注(自定义单价)	1044 单价(3.4)	2023-12-27 16:08:47	-
162	mubqKg3vh	74.80	曲标注(自定义单价)	22 单价(3.4)	2023-12-27 16:08:33	-
161	mubqNCrh	105.40	曲标注(自定义单价)	31 单价(3.4)	2023-12-27 16:08:26	-
160	mubq85Nhh	251.60	曲标注(自定义单价)	74 单价(3.4)	2023-12-27 16:08:19	-
159	mubq5QWeh	670.50	曲标注(自定义单价)	149 单价(4.5)	2023-12-27 16:05:46	-
158	mubsqweSh	2,286.00	曲标注(自定义单价)	508 单价(4.5)	2023-12-27 16:04:08	-
157	mubqfd1sh	1,071.00	曲标注(自定义单价)	238 单价(4.5)	2023-12-27 16:03:44	-
156	mubqeVS2h	1,485.00	曲标注(自定义单价)	330 单价(4.5)	2023-12-27 16:03:16	-
155	mubqas3eh	112.50	曲标注(自定义单价)	25 单价(4.5)	2023-12-27 16:02:20	-

Supplementary Figure 74. The settlement records for song annotation, showing quantity and final unit price.