

Voice Module User Manual

Voice Module User Manual

Voice Module Model

The voice module on N2 uses the iFlytek USB sound card kit. Please see the following for details:

[This type of content is not currently supported for download]

If the customer purchases the standard version with the voice module installed, the voice module is directly connected to the N2's [motion control board \(RK3588S\)](#).

Sound pickup range: 3 meters (The actual sound pickup range varies depending on the environment and volume)

Intelligent Q&A and Role Settings

After the robot is turned on, the voice module is automatically turned on. Wake it up by calling "Xiao Wantong" (N2) / "Little Whirlwind" (E1). It will automatically turn off after 30 seconds (customizable time) of no response.

Sub-accounts will be opened later, and users can log in to the platform to use them. Customers can use sub-accounts to modify wake-up words and promot.

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Voice Module Model

Intelligent Q&A and Role Settings

1. Register and log in

2. My Application

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SDK

Glossary:

Quick Start

Play audio

This document is mainly for usage guidance. For detailed development documentation, please visit <https://aiui-doc.xf-yun.com/project-1/doc-1/>

1. Register and log in

1. Go to iFlytek AIUI Platform: <https://aiui.xfyun.cn/>, and click to log in or register



Choose to log in or register

2. If you have an iFlytek Cloud Platform account, you can log in directly. If not, you need to register

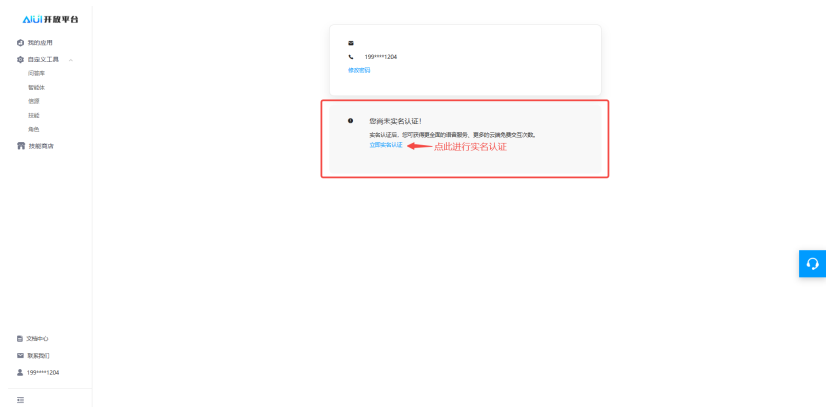


Enter the account and password

- After completing the login or registration, you need to complete the real-name authentication to use the AIUI platform. Check the authentication status in your personal information



Personal information



Click to complete real-name authentication

2. My Application

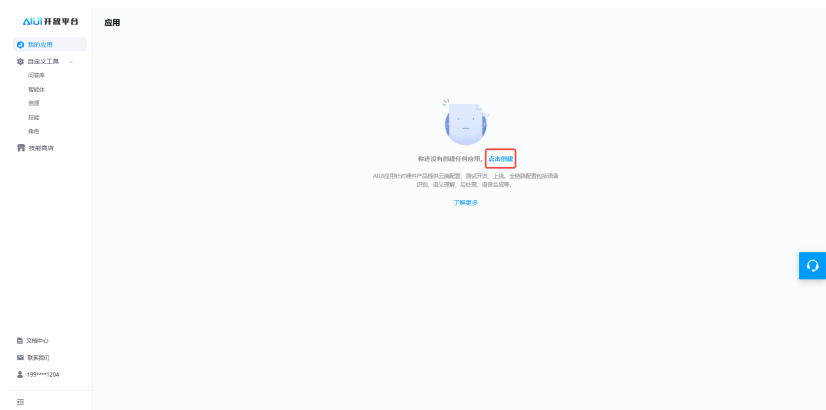
Basic process: Create application -> Customize business creation -> Application configuration -> Simulation test -> Review/Publish **Custom business creation**

2.1 Create Application

1. First, you need to create an application.

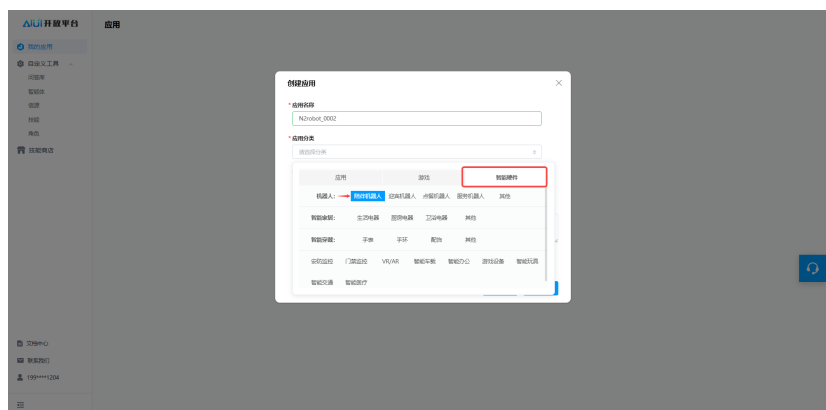


Click on My app



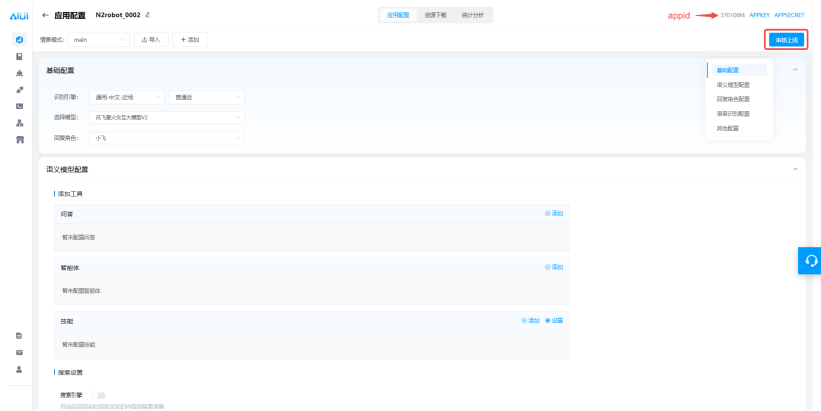
Click on My app

2. Fill in the basic application information, and select [Smart Hardware - Robot - Companion Robot] for the application category.



Click on smart hardware

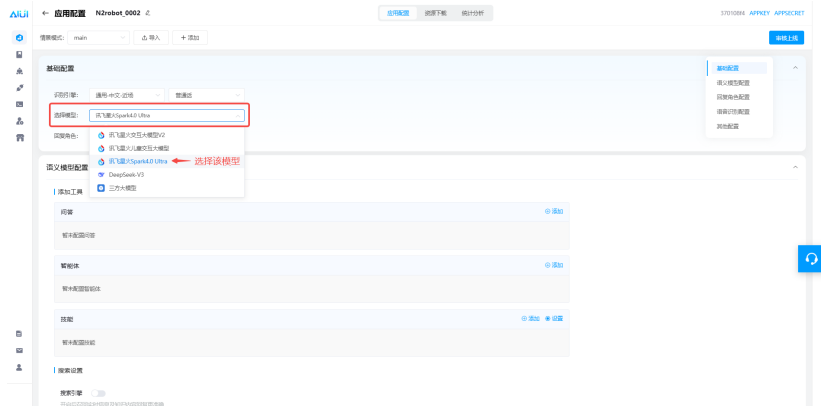
3. After creating the application, you need to [Review and Launch] first, which usually takes 1-2 working days. For urgent requests, please provide the appid to business or technical support. The application can be used after it is launched.



Review and launch

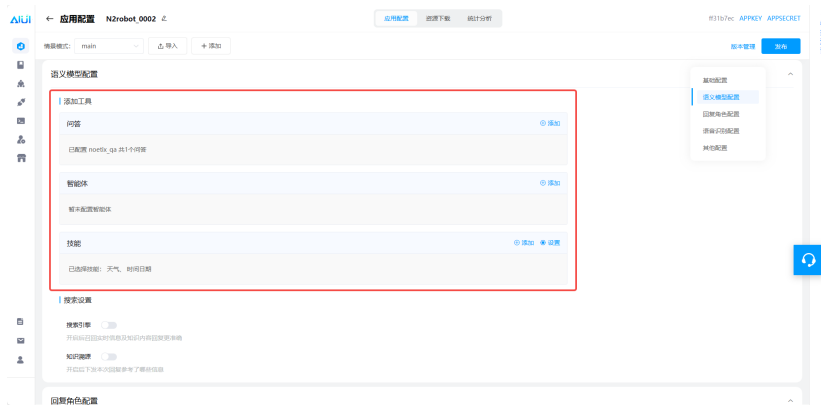
2.2 Application Configuration

1. Basic configuration: You need to select the model [讯飞星火Spark4.0 Ultra]



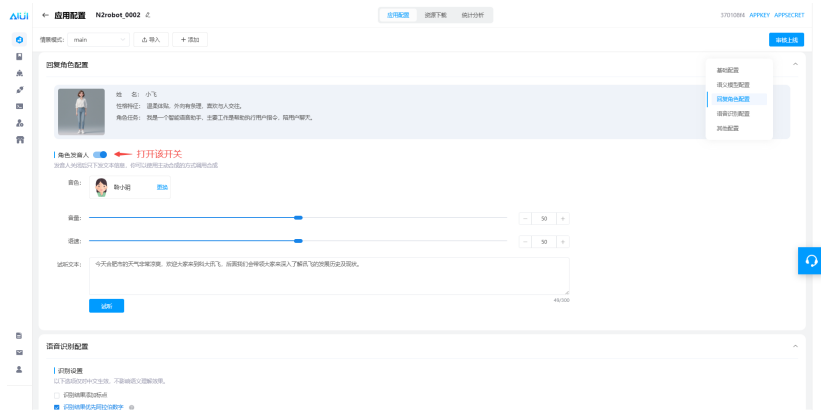
Choose the third one Spark4.0 Ultra

2. Click to view the usage guide for commonly used custom businesses



Add tools, configure agents, and select skills

3. Reply role configuration: You need to turn on the role speaker switch



Turn on the character voice switch

3. Custom Business

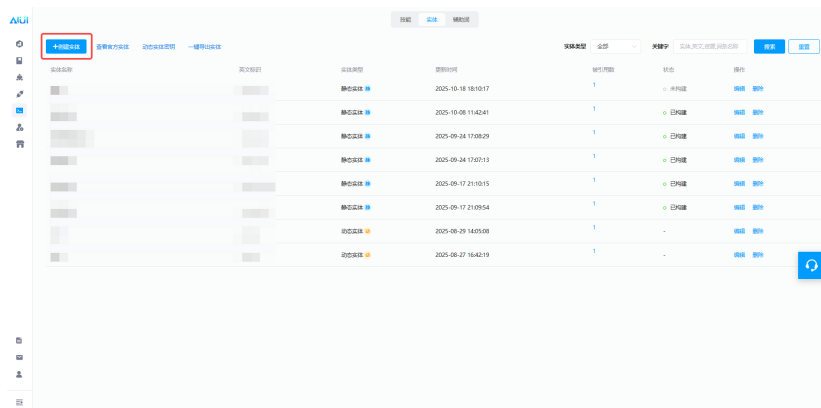
3.1 Skill Import and Export

This step requires you to request the import entity table, auxiliary word table, and skill compressed package file from business or technical support before proceeding. If there are no skills that need to be imported or exported, you can skip this section.

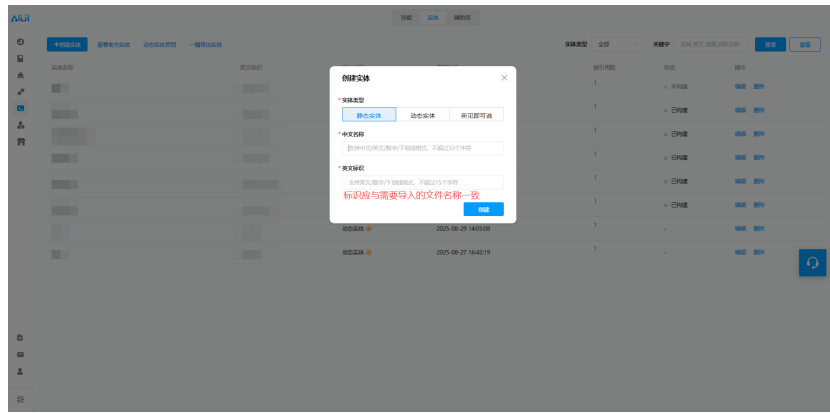
Basic process: Create entity, intent -> Import entity, intent -> Create skill -> Import skill -> Build skill -> Publish -> Application configuration

3.1.1 Entity Creation and Import

Step 1 Create auxiliary words, and the identifier must be consistent with the name of the entity table file to be imported.



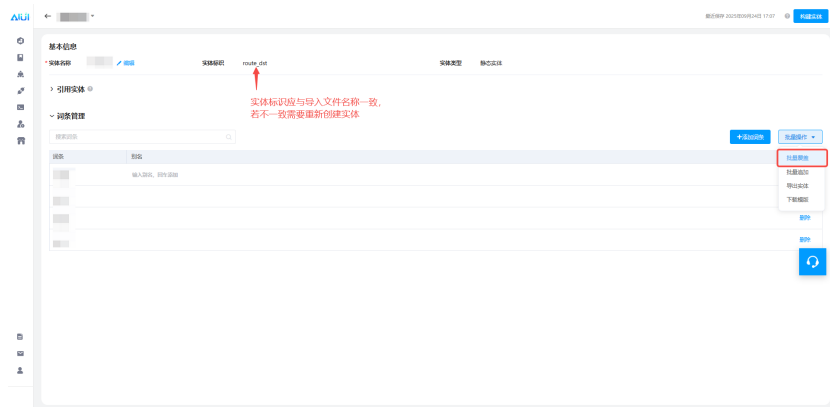
Click "Create Entity"



Choose static, dynamic or what you see to speak

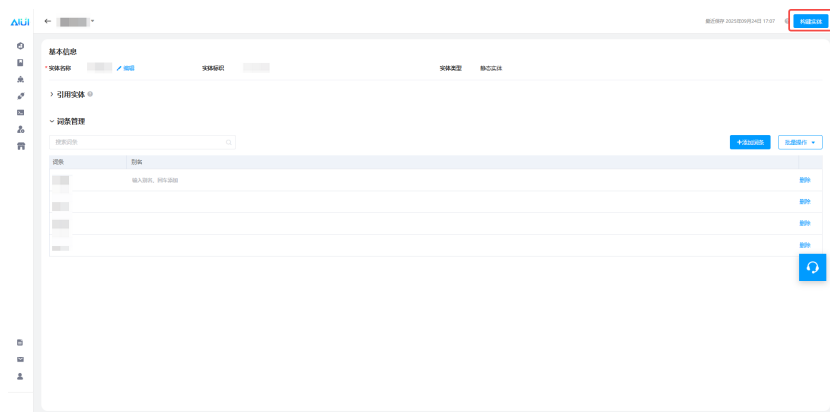
Enter the Chinese and English names

Step 2 Select the table file corresponding to the label to import



Enter the entity identifier: The entity identifier should be consistent with the imported file name. If they are not, the entity needs to be recreated.

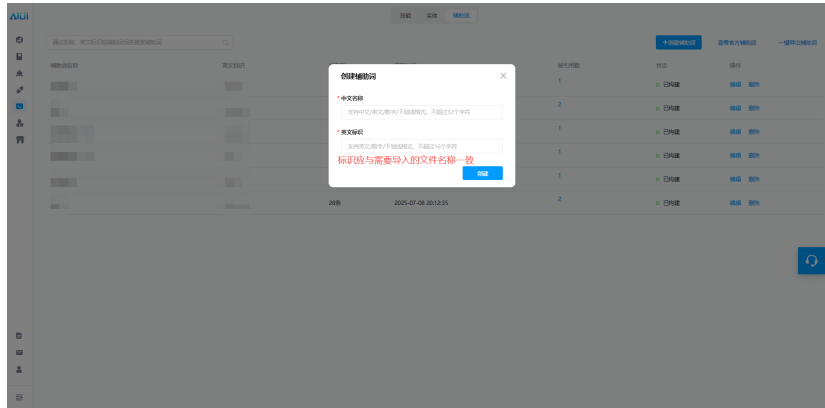
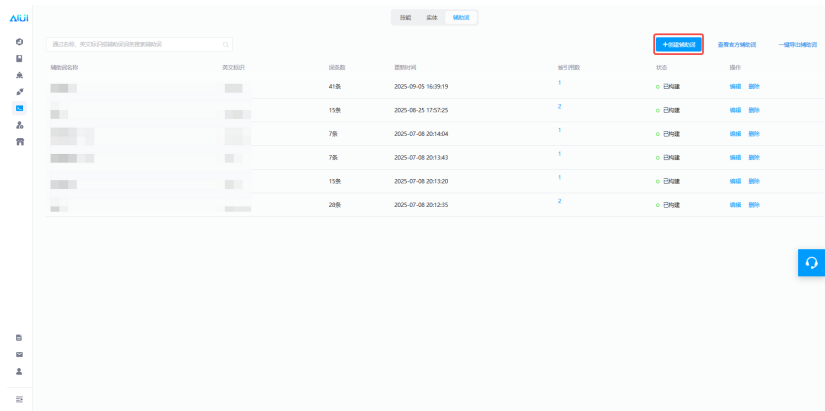
Step 3 Build entity



Build entities.

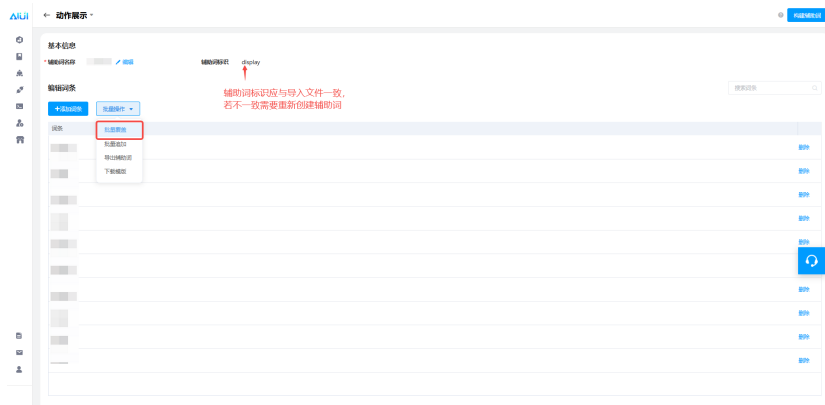
3.1.2 Auxiliary Word Creation and Import

Step 1 Create an entity, and the identifier must be consistent with the name of the auxiliary word table file to be imported.



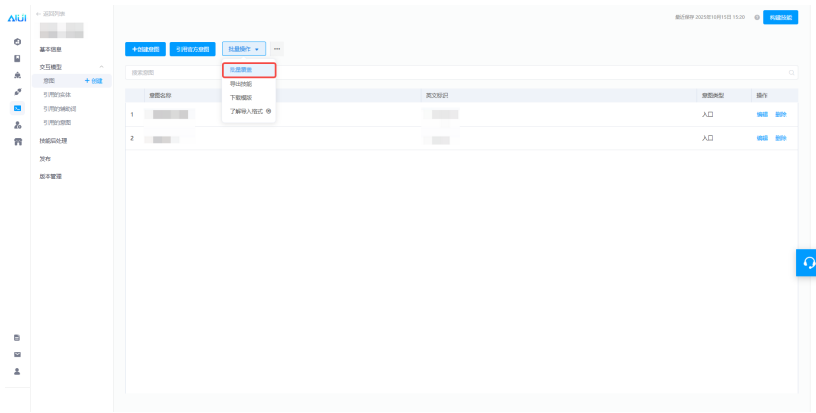
Create auxiliary words.

Step 2 Select the table file corresponding to the label to import



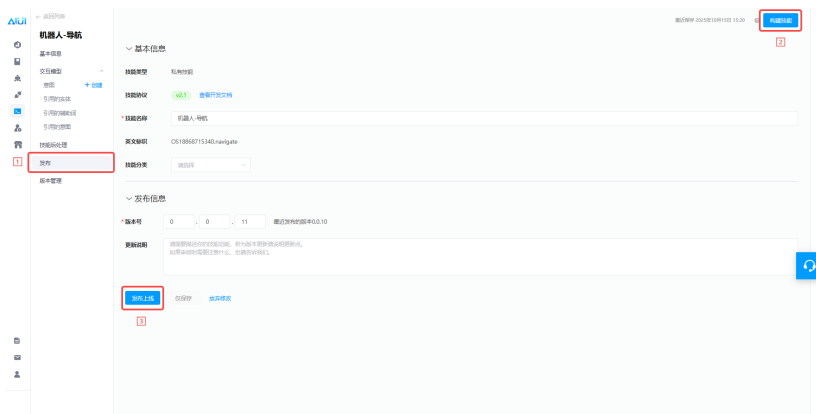
The auxiliary word identifier should be consistent with the imported file. If they are not, the auxiliary words need to be recreated.

Step 3 Build auxiliary words

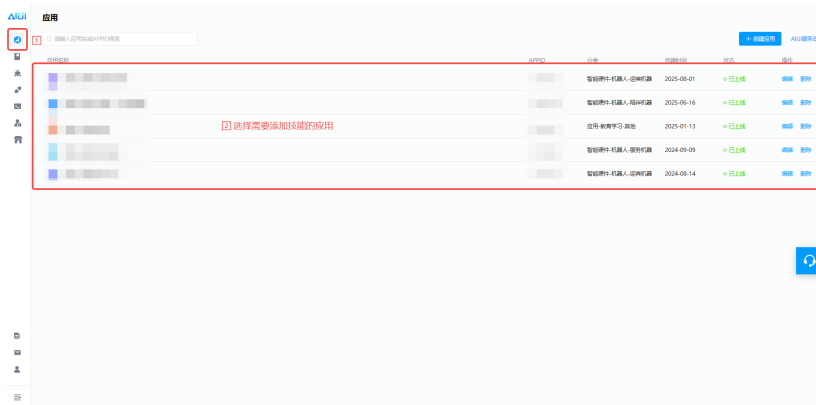


Select batch coverage.

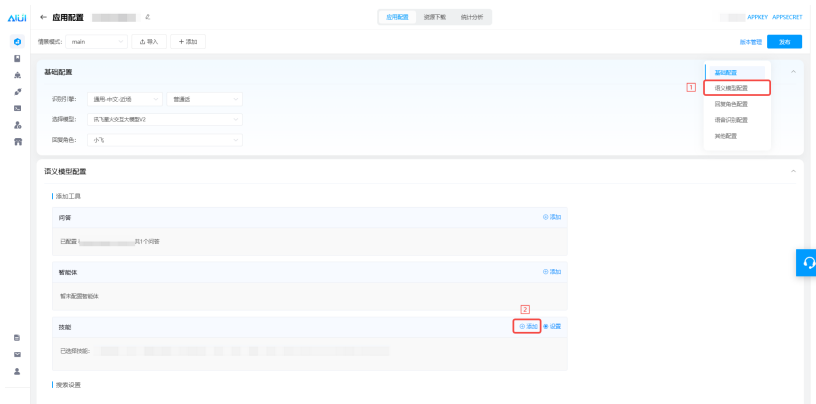
Step 3 Build and publish the skill



Step 4 Add the skill to the application and publish it



Select the skill application you want to add.



3.2 Question and Answer Database



Question and answer database applicable scenarios:

- Large Model Document Q&A: Suitable for scenarios where document knowledge is extracted and interacted with.
- Statement Q&A: Suitable for question and answer pairs where the interactive content and responses are clear.
- Keyword Q&A: Keyword logic judgment can be made for question statements



Create a theme, add questions and answers.

Q&A library priority: Statement Q&A > Document Q&A

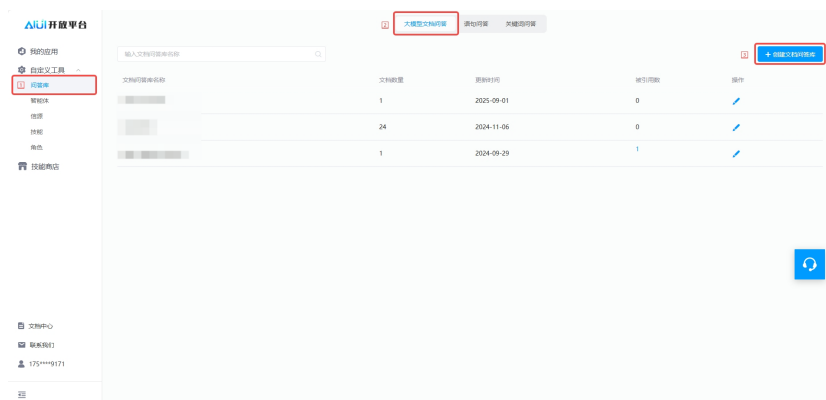
3.2.1 Large Model Document Question Answering

This step requires requesting the import document file from business or technical support before proceeding.

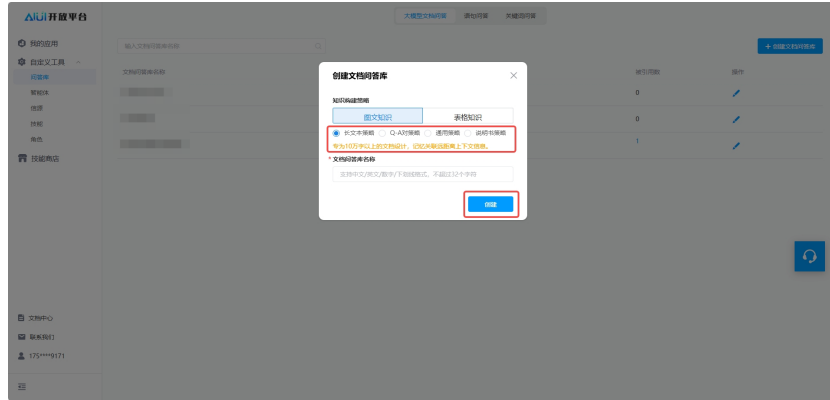
Basic process: Create question answering library -> Add document -> Build and publish -> Application configuration

• Operation steps

Step 1 Go to [Question Answering Library] in [Large Model Document Question Answering], click [Create Document Question Answering Library]

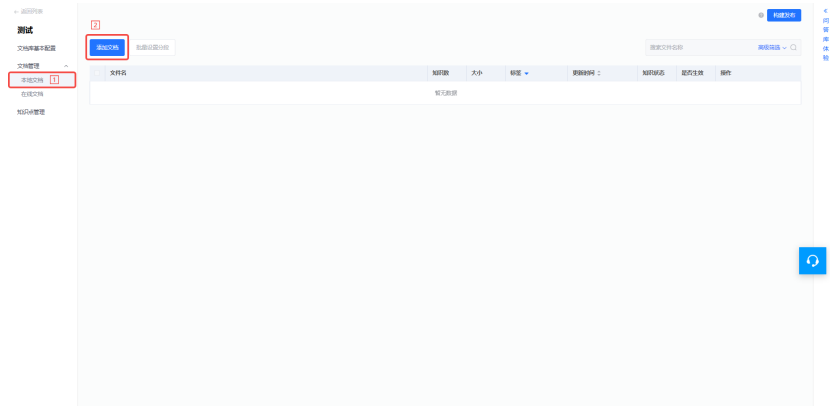


Step 2 Select [Long Text Strategy] under [Image and Text Knowledge], fill in the document question answering library name and create it



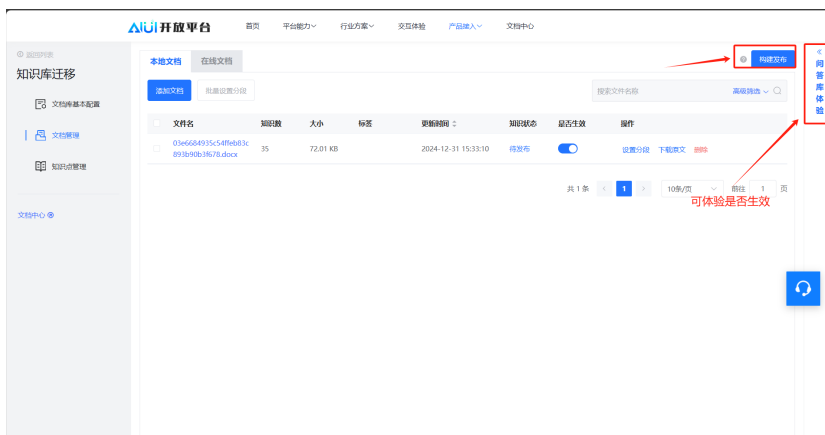
Long text strategy, QA pair strategy, general strategy, instruction manual strategy.

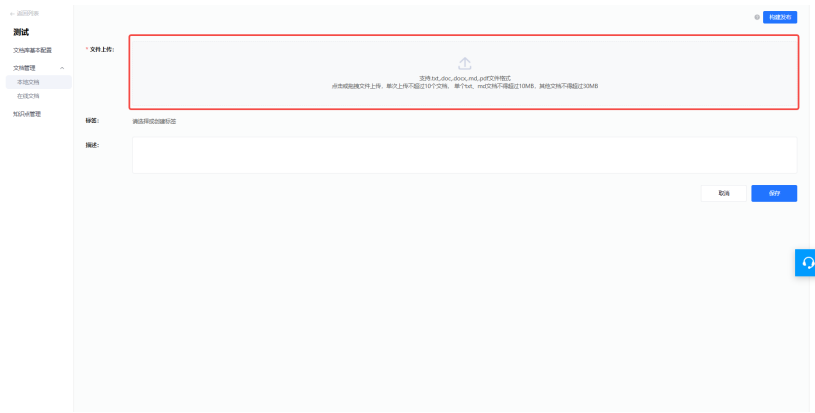
Step 3 Go to the [Local Document] of the newly created document question answering library, click [Add Document], upload the required knowledge base document and save it



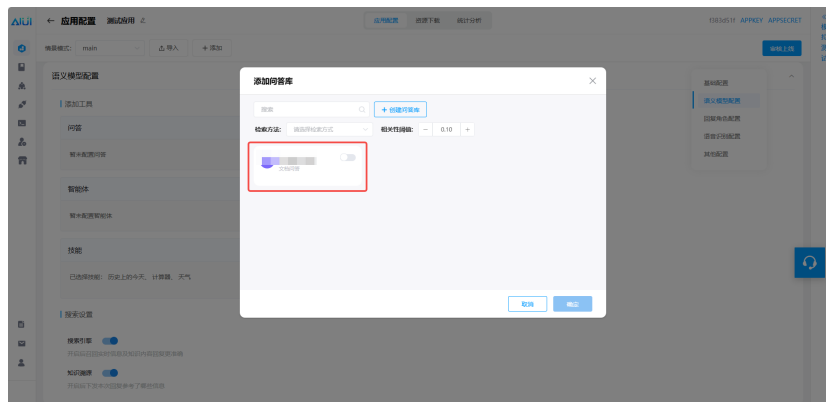
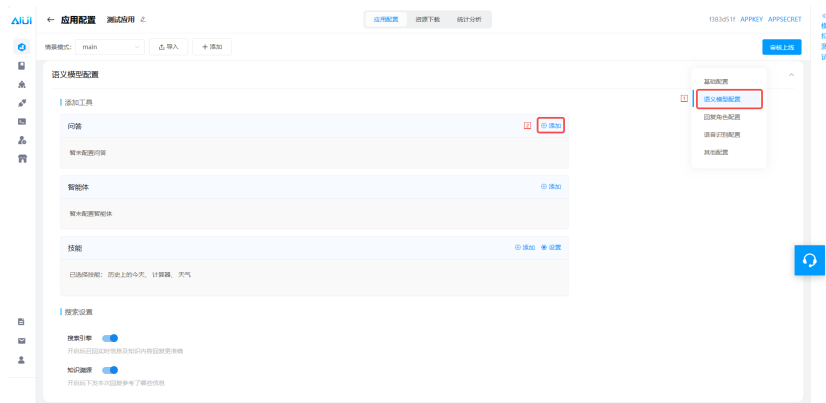
Step 4 Click [Build and Publish]. After the build is successful, you can experience and test the knowledge question answering effect on the right side of the interface.

Note: Each time you change the document in the knowledge base, you need to build and publish the knowledge base, and then publish the application that references the skill again.





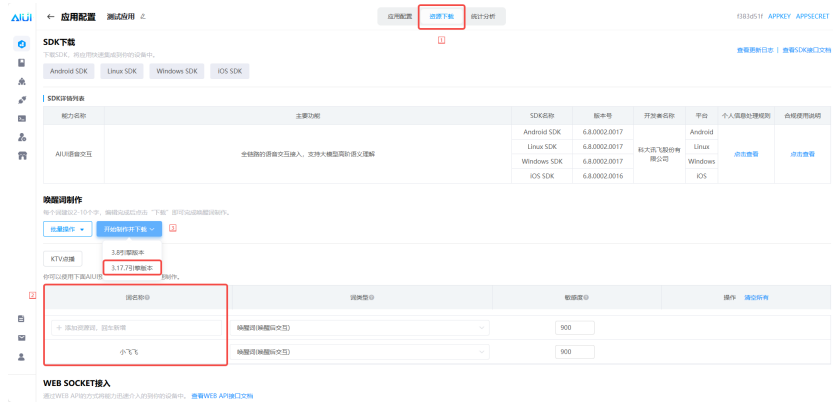
Step 5 Return to [My Application], select the application that needs to be configured, and add it to [Question Answering] in [Semantic Model Configuration]



4. Wake-up word replacement

Light customization only guarantees the realization of functions. **If there are strict requirements for the effect, you need to contact Songyan Power for deep customization of the wake-up word.**

Step 1 Enter [Resource Download] in the application, enter the wake-up word name, type, and sensitivity (it is recommended to use the default), and click [3.17.7 engine version] under [Start making and downloading] to download the wake-up word resource



Step 2 After the download is complete, unzip the file. There will be a res.bin file. Rename the created res.bin to mic4.bin and replace the /sdcard/AIUI/vtn/mic4.bin under the directory.

Step 3 adb reboot to restart the device

5. Add third-party intelligent agent

Adding a third-party intelligent agent needs to meet the parameter format requirements and fill in the default key id and query



SDK

To be opened later

Glossary:

Reply role: is an AIUI platform-provided large model device persona solution. In addition to the officially set roles, it also supports developers to define their own role replies.

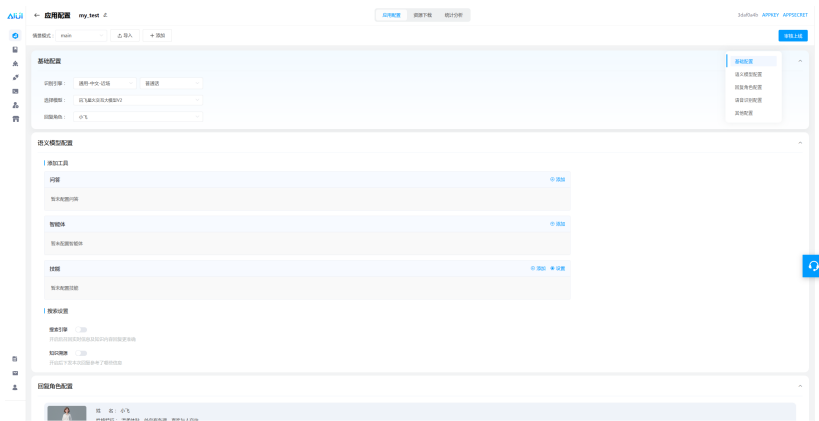
Intelligent agent: is an intelligent application or entity that can act autonomously, perceive the environment, make decisions, and interact with the environment

Skill: is a voice-driven AIUI application designed to provide a solution to a user's specific type of interaction needs; it provides dialogue interaction processes, structured results or knowledge responses, source query and other related content for a specific type of need.

Intent: Refers to a clear user purpose. **Example: The restaurant skill includes reservation and ordering intents.** Intent is the basic component of a skill, and each intent generally represents one or a set of functions.

Entity: It is a vocabulary, and words of the same type are summarized as an entity. **Example: The {city} entity includes Beijing, Shanghai, Guangzhou**

<https://aiui-doc.xf-yun.com/project-1/doc-43/>



You can also import third-party large models (that comply with the OpenAI interface)

Quick Start

After waiting for about 1 minute after booting, stand in front of the robot and call "Xiao Wantong" to wake it up.

We can directly use the voice module through commands in the terminal, through aplay or arecord, or we can use software such as mpv or vlc.

The sound card device name is: [alsa_output.usb-Generic_USB2.0_Device_20170726905923-01.iec958-stereo](#)

Play audio

We can directly connect to 3588 remotely and use the audio module through terminal commands. The following uses mpv as an example.

mpv

Bash

```
sudo apt update  
sudo apt install mpv  
mpv --audio-device=pulse/alsa_output.platform-sound.analog-  
stereo your audio file.mp3  
sudo apt install mpv
```