

4. OpenRouter Large Model API Aggregation Platform Text Interaction Tutorial

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Concept Introduction

1.1 What is "OpenRouter"?

OpenRouter is a **large model API aggregation platform**. You can think of it as a "universal remote control for large models". Normally, if you want to use OpenAI's GPT-4, Anthropic's Claude-3, and Google's Gemini, you need to register accounts on three platforms separately, obtain three sets of API Keys, and write three different sets of calling code for their respective API formats.

However, OpenRouter solves this problem. It provides a **unified API interface** (compatible with OpenAI's API format), where you only need one OpenRouter API Key to call all the above models and hundreds of other open-source and closed-source models through this single entry point.

The **core advantages** of integrating OpenRouter in the `TargetModel` project are:

- **Ultimate Flexibility:** You can seamlessly switch between GPT, Claude, Llama, and any other models by simply modifying a model name in the configuration file, without changing any code.
- **Cost-effectiveness:** OpenRouter provides clear pricing for each model, allowing you to easily compare and select the most cost-effective model to perform specific tasks.
- **Explore Cutting-edge Models:** Many new and excellent open-source models are included on OpenRouter as soon as they are released, allowing developers to quickly try them out.

In the `TargetModel` project, you can enable this powerful aggregation platform by configuring the `llm_platform` parameter to `openrouter`.

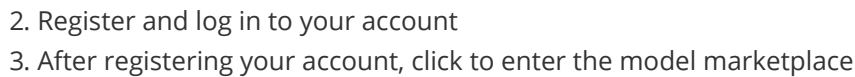
2. Practical Operations

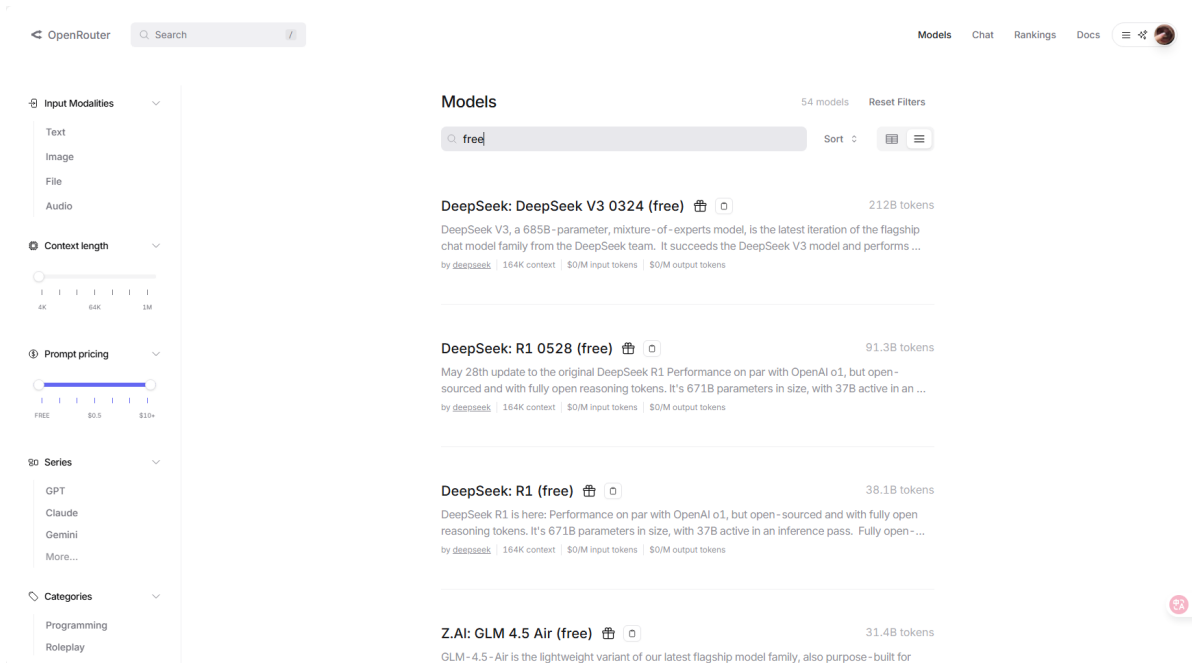
2.1 Obtain API Credentials

1. **Register for OpenRouter:** Visit [OpenRouter.ai](https://openrouter.ai) and register an account using Google or email. If the link is not working, you need to search for "OpenRouter" platform yourself.
2. **Top Up:** OpenRouter uses a prepayment model. You need to top up a small amount (e.g., \$5) on the "Credits" page before you can start using it. Alternatively, you can use the free models they provide, but there are rate limits.

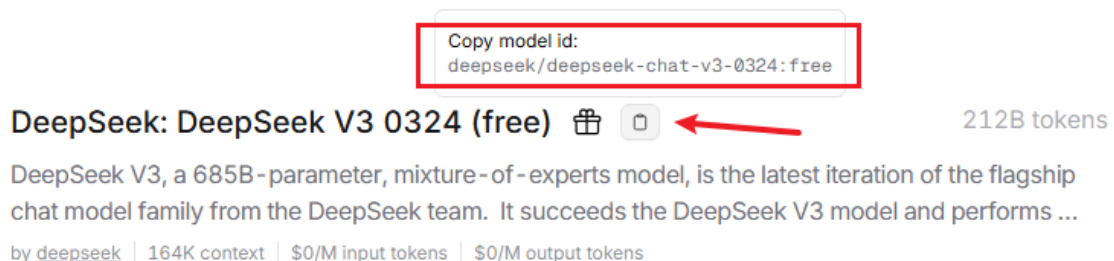
- ## 2.2 Graphical Process

- OpenRouter

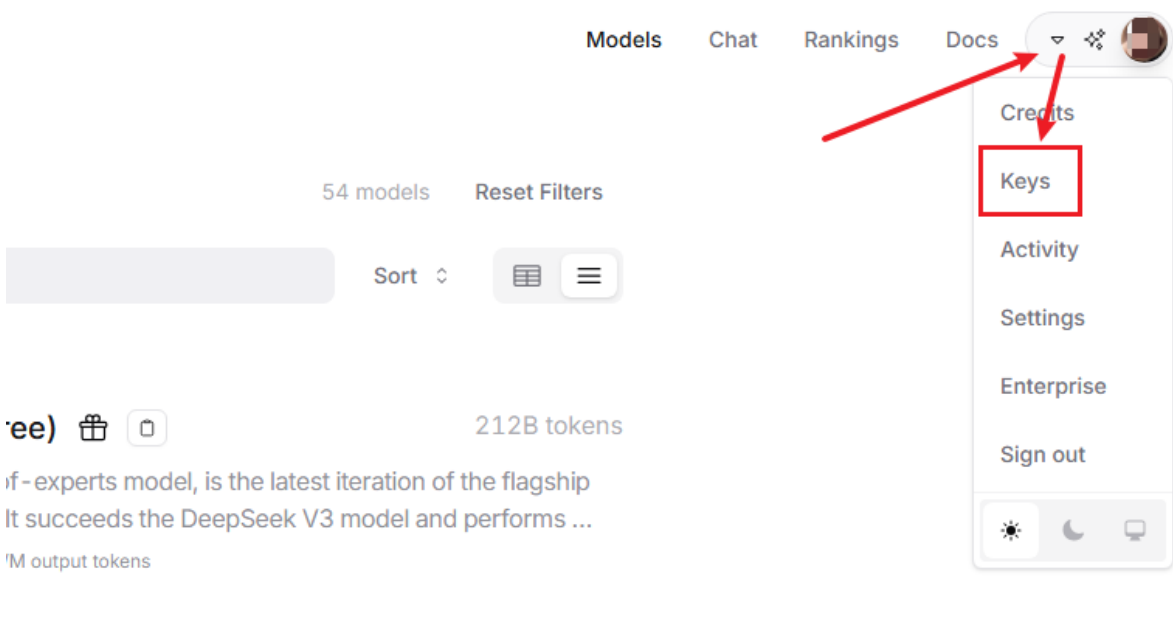




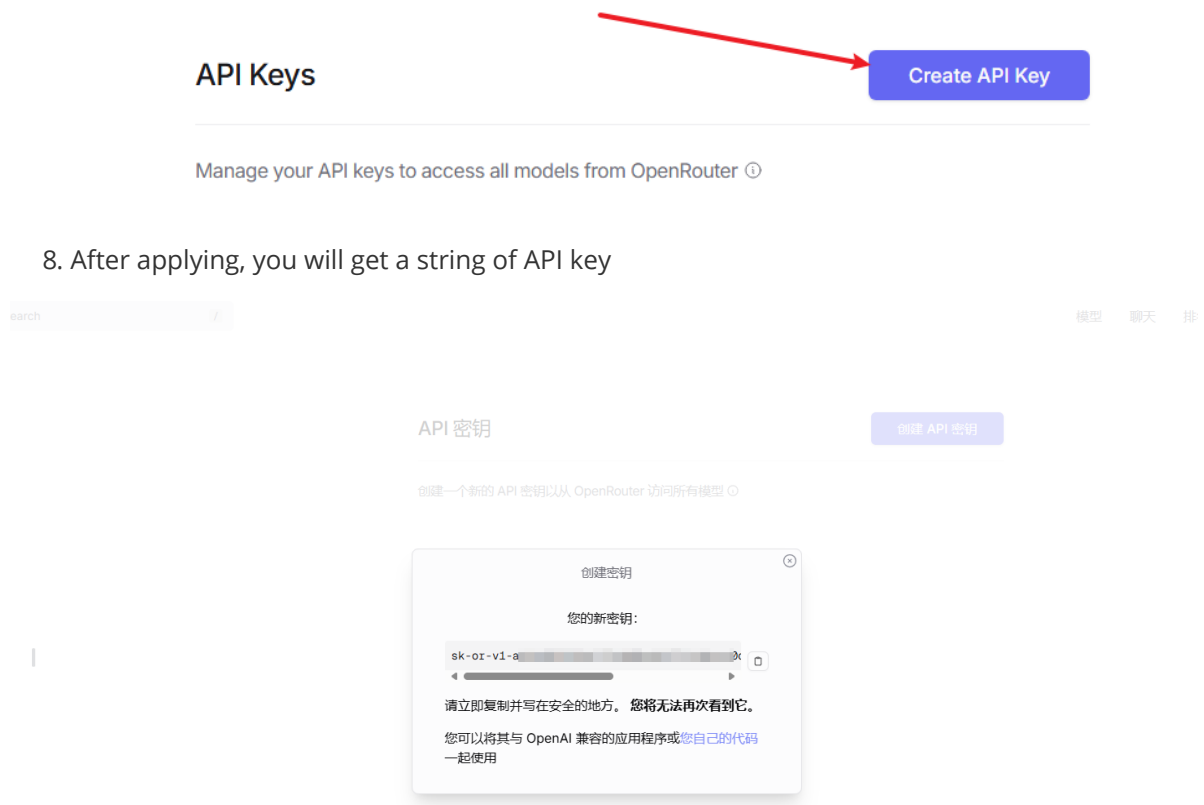
5. Hover your mouse over the clipboard icon next to the model to see the name used when calling the model, click once to copy it.



6. Move your mouse to the top right corner next to the avatar, it will expand, you can click Keys to go in and create a key.



7. Click to apply for API key



8. After applying, you will get a string of API key



2.3 Configuration File Modification

1. Open `large_model_interface.yaml`:

```
# Open configuration file
vim ~/yahboom_ws/src/largemodel/config/large_model_interface.yaml
```

Then change `sk-xxxxxxxxxx` in `openrouter_api_key` to the API key you just copied.

`openrouter_model` is used to configure the large model for conversation.

```
# OpenRouter platform configuration
openrouter_api_key: "sk-xxxxxxxxxxxxxxxxxxxxxx"
openrouter_model: "moonshotai/kimi-k2:free" # Model to use, for example
"google/gemini-pro-vision"
```

2. Open `yahboom.yaml`:

```
# Open yahboom configuration file
vim ~/yahboom_ws/src/largemodel/config/yahboom.yaml
```

3. **Switch Platform:** Modify the `llm_platform` parameter to `openrouter`.

```
# Set large model platform to openrouter  
llm_platform: 'openrouter'
```

After switching the platform parameters, return to the workspace and recompile to take effect.