

AI model environment deployment

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Demonstration environment

Development board : Raspberry Pi 5B (8G RAM)

SD(TF)card: 64G (Above 16G, the larger the capacity, the more models can be experienced)

Raspberry Pi 5B (16G RAM): Run 14B and below parameter models
Raspberry Pi 5B (8G RAM): Run 8B and below parameter models
Raspberry Pi 5B (4G RAM): Run 3B and below parameter models
Raspberry Pi 5B (2G RAM): Run 0.5B and below parameter models

Ollama is an open-source tool aimed at simplifying the deployment and runtime process of large language models, allowing users to use high-quality language models in their local environment.

LLM

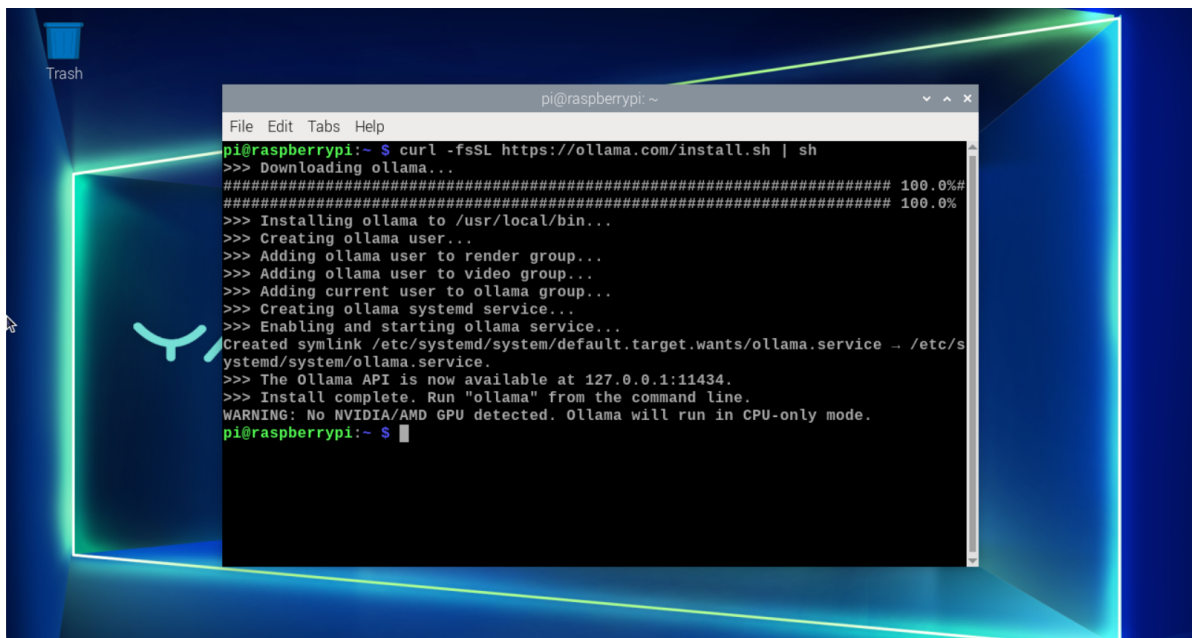
Large Language Models, abbreviated as LLM, is a type of advanced text generation system based on artificial intelligence technology. Its main feature is the ability to learn and understand human language through large-scale training data, and to generate natural and fluent text.

Ollama installation

Tutorial demonstration on using scripts to install Ollama in Raspberry Pi 5.

Script installation

```
curl -fsSL https://ollama.com/install.sh | sh
```



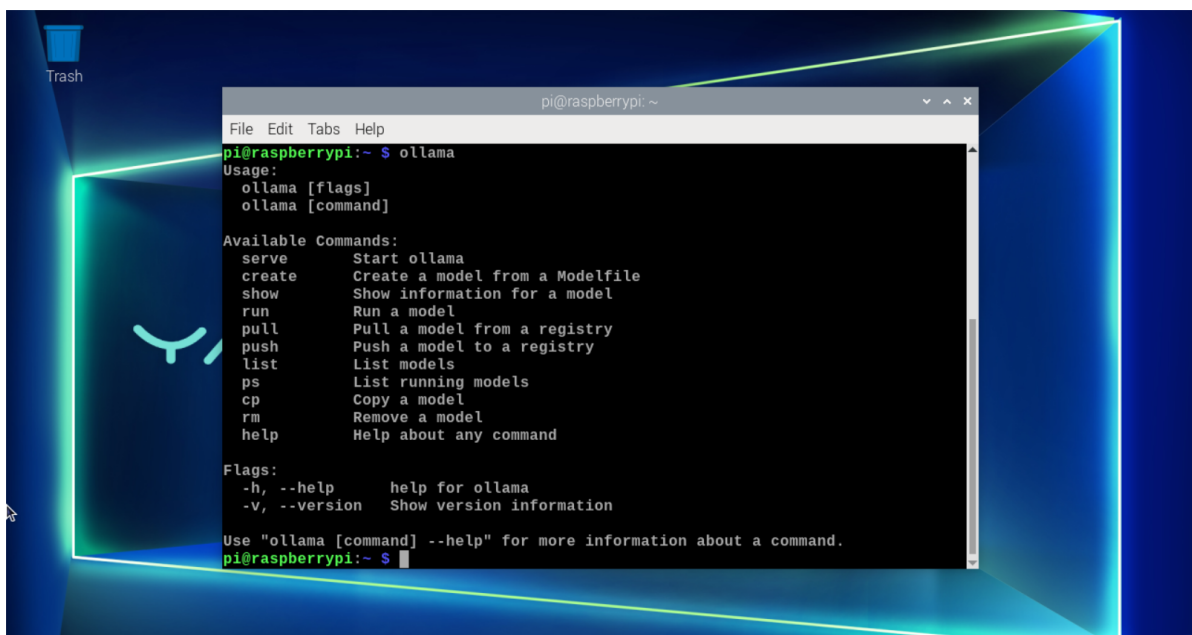
The installation process takes a long time, please be patient and wait;

When the Raspberry Pi terminal displays "Install complete", it indicates that Ollama has been successfully installed!

Warning: NVIDIA/AMD GPU not detected, Ollama will run in CPU mode, we can ignore this prompt directly

Ollama use

When entering the command **ollama** on the terminal, we can see the following prompt.



| Command | Function |
|---------------|--|
| ollama serve | Start ollama |
| ollama create | Create a model from a model file |
| ollama show | Display model information |
| ollama run | Operational model |
| ollama pull | Pulling models from the registry |
| ollama push | Push the model to the registry |
| ollama list | List models |
| ollama ps | List the running models |
| ollama cp | Copy model |
| ollama rm | Delete model |
| ollama help | Get help information about any command |

Ollama uninstall

- Delete service

```
sudo systemctl stop ollama
sudo systemctl disable ollama
sudo rm /etc/systemd/system/ollama.service
```

- Delete file

```
sudo rm $(which ollama)
```

- Delete model and service users and groups

```
sudo rm -r /usr/share/ollama
sudo userdel ollama
sudo groupdel ollama
```

Reference material

Ollama

Website: <https://ollama.com/>

GitHub: <https://github.com/ollama/ollama>