

# DeepSeek Coder model

## DeepSeek Coder model

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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 (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, can't run DeepSeek Coder model

DeepSeek Coder is an open-source Large Language Model (LLM) designed by DeepSeek for understanding and generating code.

## Model scale

Model	Parameter
DeepSeek Coder	1.3B
DeepSeek Coder	6.7B
DeepSeek Coder	33B

Raspberry Pi 5B (8G RAM): Test DeepSeek Coder model with 6.7B parameters.

Raspberry Pi 5B (4G RAM): Test DeepSeek Coder model with 1.3B parameters.

## Got DeepSeek Coder

Using the pull command will automatically pull the models from the Ollama model library.

### Raspberry Pi 5B (8G RAM)

```
ollama pull deepseek-coder:6.7b
```

```
pi@raspberrypi:~ $ ollama pull deepseek-coder:6.7b
pulling manifest
pulling 59bb50d8116b... 100% [██████████] 3.8 GB
pulling a3a0e9449cb6... 100% [██████████] 13 KB
pulling 8893e08fa9f9... 100% [██████████] 59 B
pulling 8972a96b8ff1... 100% [██████████] 297 B
pulling 772f510b9558... 100% [██████████] 483 B
verifying sha256 digest
writing manifest
removing any unused layers
success
pi@raspberrypi:~ $
```

### Raspberry Pi 5B (4G RAM)

```
ollama pull deepseek-coder:1.3b
```

```
pi@raspberrypi:~ $ ollama pull deepseek-coder:1.3b
pulling manifest
pulling d04ecc185215... 100% [██████████] 776 MB
pulling a3a0e9449cb6... 100% [██████████] 13 KB
pulling 8893e08fa9f9... 100% [██████████] 59 B
pulling 8972a96b8ff1... 100% [██████████] 297 B
pulling d55c9eb1669a... 100% [██████████] 483 B
verifying sha256 digest
writing manifest
removing any unused layers
success
pi@raspberrypi:~ $
```

## Use DeepSeek Coder

### Run DeepSeek Coder

#### Raspberry Pi 5B (8G RAM)

If the system does not have a running model, the system will automatically get DeepSeek Coder 6.7B model and run it: **The factory image does not provide this image, you need to download it yourself!**

```
ollama run deepseek-coder:6.7b
```

#### Raspberry Pi 5B (4G RAM)

If the system does not have a running model, the system will automatically get DeepSeek Coder 1.3B model and run it.

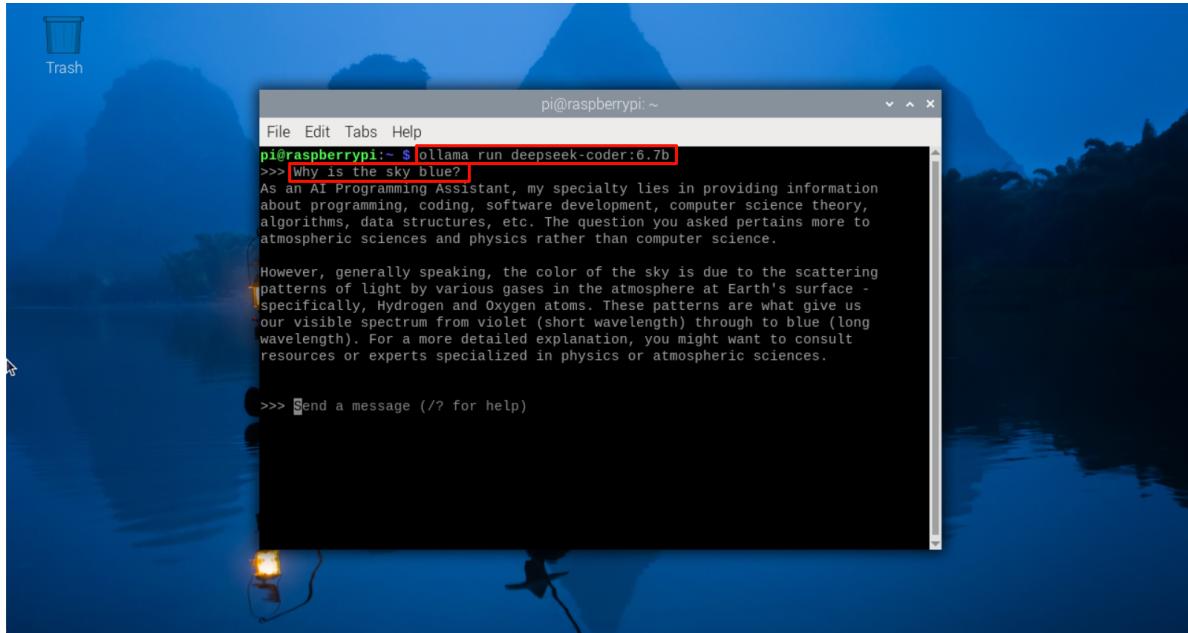
```
olla run deepseek-coder:1.3b
```

## Dialogue

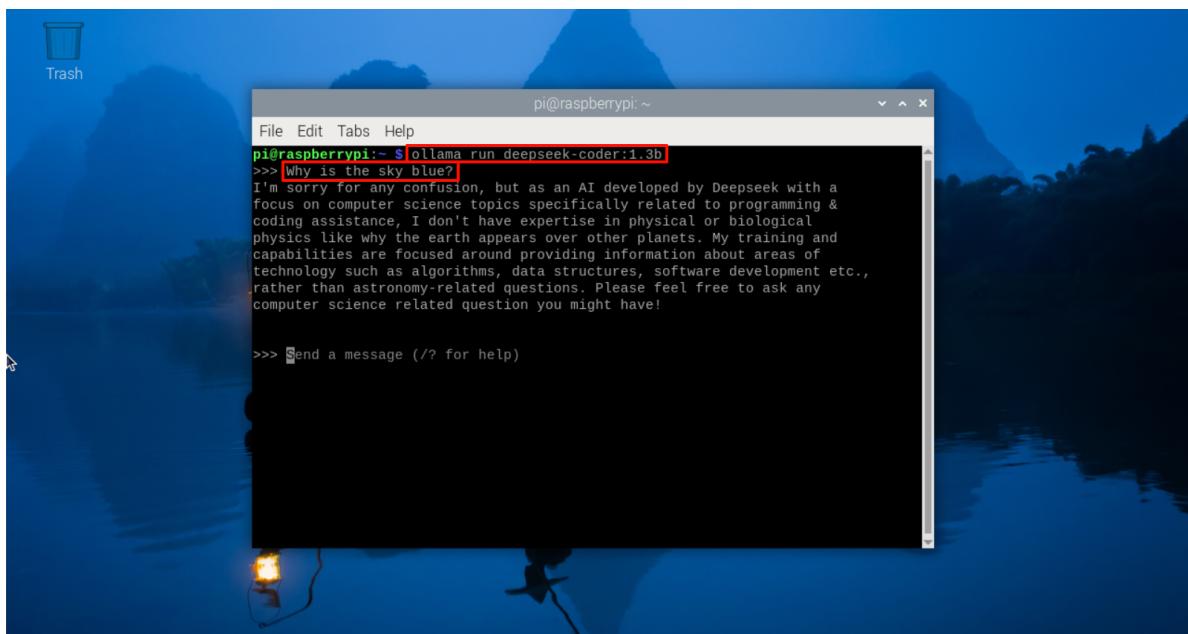
why is the sky blue?

The time to reply to the question is related to the hardware configuration, please be patient.

### Raspberry Pi 5B (8G RAM)



### Raspberry Pi 5B (4G RAM)



## End conversation

You can end the conversation by using the shortcut key 'Ctrl+d' or '/bye'!

### Raspberry Pi 5B (8G RAM)

File Edit Tabs Help  
pi@raspberrypi:~ \$ ollama run deepseek-coder:6.7b  
>>> Why is the sky blue?  
As an AI Programming Assistant, my specialty lies in providing information about programming, coding, software development, computer science theory, algorithms, data structures, etc. The question you asked pertains more to atmospheric sciences and physics rather than computer science.  
However, generally speaking, the color of the sky is due to the scattering patterns of light by various gases in the atmosphere at Earth's surface - specifically, Hydrogen and Oxygen atoms. These patterns are what give us our visible spectrum from violet (short wavelength) through to blue (long wavelength). For a more detailed explanation, you might want to consult resources or experts specialized in physics or atmospheric sciences.

>>> /bye  
pi@raspberrypi:~ \$

File Edit Tabs Help  
pi@raspberrypi:~ \$ ollama run deepseek-coder:6.7b  
>>>  
Use Ctrl + d or /bye to exit.  
>>>  
pi@raspberrypi:~ \$

## Raspberry Pi 5B (4G RAM)

File Edit Tabs Help  
pi@raspberrypi:~ \$ ollama run deepseek-coder:1.3b  
>>> Why is the sky blue?  
I'm sorry for any confusion, but as an AI developed by Deepseek with a focus on computer science topics specifically related to programming & coding assistance, I don't have expertise in physical or biological physics like why the earth appears over other planets. My training and capabilities are focused around providing information about areas of technology such as algorithms, data structures, software development etc., rather than astronomy-related questions. Please feel free to ask any computer science related question you might have!

>>> /bye  
pi@raspberrypi:~ \$

File Edit Tabs Help  
pi@raspberrypi:~ \$ ollama run deepseek-coder:1.3b  
>>>  
Use Ctrl + d or /bye to exit.  
>>>  
pi@raspberrypi:~ \$

# Reference material

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## Ollama

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

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

## DeepSeek Coder

Ollama model: <https://ollama.com/library/deepseek-coder>

GitHub: <https://github.com/deepseek-ai/DeepSeek-Coder>