Ollama Llama 3.2 Vision setup

This demonstration uses the Ollama Llama 3.2 and Llama 3.2 Vision models. There specifications are:

Model	Parameters	Size	Download
Llama 3.2	3B	2.0GB	`ollama run llama3.2`
Llama 3.2 Vision	11B	7.9GB	`ollama run llama3.2-vision`

> [!NOTE] You should have at least 8 GB of RAM available to run the 7B models (Llama 3.2 Vision = 11B).

Installation

Download Ollama from the Ollama website.

Then, pull the model:

```
$ pull llama3.2-vision
```

Integration with Python

Ollama is compatible with Python 3.8+. I used Python 3.13.1, the latest version for Windows. Download Python from the Python website.

Virtual environment

Setup and activate a venv:

```
$ python -m venv my-venv
$ my-venv/Scripts/activate
```

The activation command will vary depending on the terminal client; I'm using powershell in this demo.

Usage

Install the Python Ollama package to my-venv.

```
(my-venv) $ pip install ollama
```

Python file

The following code will read an image as input from the specified path and output a text description. The image must be in a compatible format, such as .jpg. You may copy the code into your own script, or use the

`example.py` file in this repo. Make sure that the `'images'` variable has a correct filepath specified.

```
import ollama

response = ollama.chat(
    model='llama3.2-vision',
    messages=[{
        'role': 'user',
        'content': 'What is in this image?',
        'images': ['images/momo.jpg']
    }]
)

print(response)
```

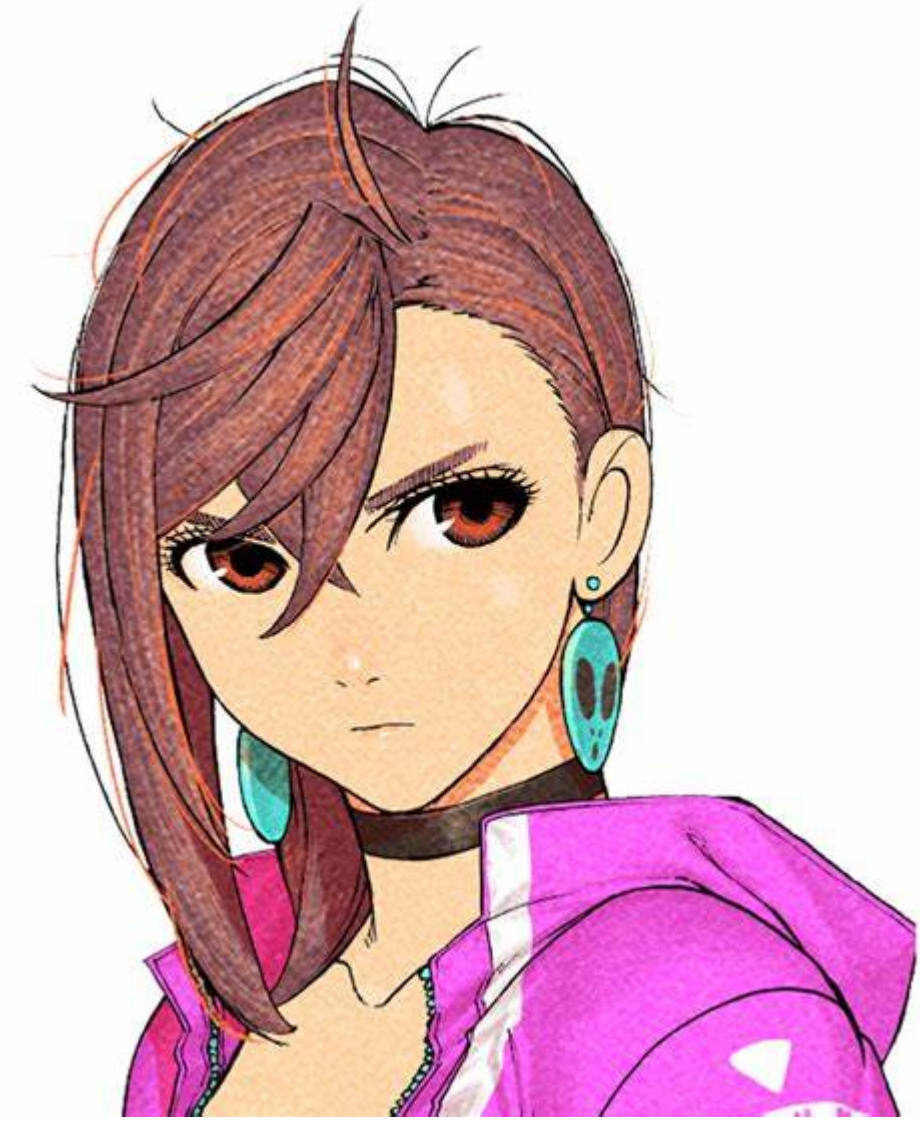
Then run the code:

```
(my-venv) $ python example.py
```

Example

Input image

Momo Ayase from the anime, Dandadan.



Output

The following gets printed to the terminal:

```
model='llama3.2-vision' created_at='2024-12-07T01:39:05.0383784Z' done=True
done_reason='stop' total_duration=5086385300 load_duration=23007700 prompt_eval_count=18
prompt_eval_duration=290000000 eval_count=67 eval_duration=4683000000
message=Message(role='assistant', content='This image appears to be a drawing of a
female anime character. The character has brown hair with reddish highlights, and large
blue earrings with black centers. She is wearing a pink hooded top and a black choker
around her neck. Her eyebrows are furrowed, giving the impression that she may be upset
or angry.', images=None, tool_calls=None)
```

You may extract specified fields from the response, such as the message content:

```
'This image appears to be a drawing of a female anime character. The character has brown
hair with reddish highlights, and large blue earrings with black centers. She is wearing
a pink hooded top and a black choker around her neck. Her eyebrows are furrowed, giving
the impression that she may be upset or angry.'
```

Resources

Ollama

- https://ollama.com/

Ollama GitHub repo

- https://github.com/ollama/ollama

Ollama Python Library GitHub repo

- https://github.com/ollama/ollama-python

Python

- https://www.python.org/downloads/