

Applied Generative AI : LLM Application Development

Dates: 12 & 19 September 2025

Lab 0: Install Ollama

Before starting the course, you need to install **Ollama** on your computer.

Step 1: Download & Install

- Go to [www.ollama.com](https://ollama.com).
- Download the installer for your operating system:
- macOS: .dmg file (drag into Applications).
- Windows: .msi installer (requires WSL2).
- Linux: .deb or .rpm package.
- Alternatively, you can install directly from the terminal (Linux/macOS)

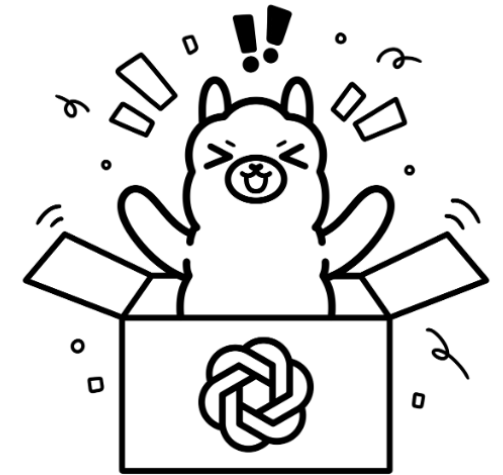
```
curl -fsSL https://ollama.com/install.sh | sh
```

Step 2: Verify Installation

Run the following command in your terminal:

```
ollama --version
```

If installed correctly, you should see the version number.



OpenAI and Ollama partner to launch gpt-oss

**Chat & build with
open models**

Download

Available for macOS,
Windows, and Linux

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Step 3: Pull Your First Model

Run the following command in your terminal:

```
ollama pull llama3
```

This may take a few minutes depending on your internet speed.

Step 4: Run a Quick Test

Run the following command in your terminal:

```
ollama run llama3
```

Simple prompt:

```
>>> Hello
```

Hello! How can I help you today?

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Step 5: Start API Server (default on `http://localhost:11434`)

Run the following command in your terminal:

```
ollama serve
```

Test with curl:

Run the following command in your terminal:

```
curl http://localhost:11434/api/generate -d '{  
  "model": "llama3",  
  "prompt": "Hello World!"  
}'
```

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Step 6: Install Models

Run the following command in your terminal:

```
ollama pull mistral  
ollama pull gemma  
ollama pull gpt-oss
```

Run the following command in your terminal

```
ollama list
```

Lab 1: Python Environment Setup

In this lab, we will prepare the Python environment that we will use throughout the course.

Step 1: Install Python 3.13.5

Download Python from the official website:

`https://www.python.org/downloads/release/python-3135/`

- Check **“Add Python to PATH”** (Windows).
- For macOS/Linux, use your package manager or installer file.

Verify installation:

```
python3 -version
```

Expected output:

```
Python 3.13.5
```

Lab 1: Python Environment Setup

Step 2 : Install pip (Python package manager)

Linux/macOS:

```
curl -sS https://bootstrap.pypa.io/get-pip.py | python3
```

Windows:

Download

```
https://bootstrap.pypa.io/get-pip.py  
python get-pip.py
```

Lab 1: Python Environment Setup

Step 3: Create Virtual Environment

We will isolate our project dependencies inside a folder called “llm”.

```
python3 -m venv llm
```

This creates a directory llm/ containing a private Python environment.

Step 4: Activate Virtual Environment

Windows (PowerShell):

```
.\llm\Scripts\activate
```

macOS/Linux:

```
source llm/bin/activate
```


Lab 1: Python Environment Setup

Step 5: Install Required Packages

- Download lab0_requirements.txt from bhattaraprot.com/lab0_requirements.txt
- Make sure the file is saved in your working directory.
- Install the required packages by running:

```
pip install -r lab0_requirements.txt
```

Step 6: Verify Installation

- Download check_ollama.py from bhattaraprot.com/check_ollama.py
- Place the file inside:

```
llm/src/check_ollama.py
```

- From inside the virtual environment, navigate to the llm/src/ folder:

```
python check_ollama.py
```

If the installation is correct, you should see the model respond with **“Hello World!!”**.