

OBJECTIVE

Install WSL 2 + Ubuntu 22.04 LTS, Docker Desktop, and Ollama with DeepSeek-R1 and LLaMA 3, all GPU-accelerated.

We'll also test that the models run locally.

STEP 1 - Enable WSL 2 and Virtualization

Run PowerShell as Admin:

```
dism.exe /online /enable-feature /featurename:VirtualMachinePlatform /all /norestart  
dism.exe /online /enable-feature /featurename:Microsoft-Windows-Subsystem-Linux /all /norestart  
wsl --set-default-version 2
```

STEP 2 - Then reboot your PC.

After enabling WSL 2, reboot your system to apply changes.

STEP 3 - Verification using PowerShell as Admin

Type: wsl --status

You should see:

Default Version: 2

STEP 4 — Install Ubuntu 22.04 LTS from Microsoft Store

1. Open Microsoft Store → search “Ubuntu 22.04 LTS”
2. Click Get / Install
3. When it opens, create a username and password (for Linux)

Verification using PowerShell as Admin:

```
wsl -d Ubuntu-22.04 -- echo "Hello from Ubuntu $(lsb_release -ds)"
```

STEP 5 — Install Docker Desktop

Visit: <https://www.docker.com/products/docker-desktop>

Click Download for Windows

Run the installer

During install, check “Use WSL 2 based engine”

After it starts, go to Settings → Resources → WSL Integration and enable Ubuntu-22.04

Verification PowerShell as Admin:

```
docker version  
docker run --rm hello-world
```

You should see: "Hello from Docker!"

STEP 6 — Install Ollama (AI Model Runner)

Visit: <https://ollama.com/download>
Click Download for Windows
Run Ollama Setup.exe
When finished, it automatically starts the local service.
Test by visiting <http://localhost:11434/> in your browser.

You should see 'Ollama is running'.

STEP 7 — Download DeepSeek-R1 and LLaMA 3

PowerShell as Admin:
ollama pull deepseek-r1
ollama pull llama3

Each model download can take several minutes depending on your internet speed.

STEP 8 — Run a Quick Test Prompt

PowerShell as Admin:
ollama run deepseek-r1:latest "Say hello in one sentence."
ollama run llama3:latest "Summarize how to set up DeepSeek locally."

STEP 9 — Optimize GPU Settings (Optional)

PowerShell as Admin:
setx OLLAMA_NUM_GPU 1
setx OLLAMA_KV_CACHE_TYPE "cuda"

Reboot PC.

Then go to <http://localhost:3000/> to access your local AIs and select which model to use.

STEP 10 — Install Open WebUI

Open WebUI provides a local web interface to interact with Ollama models like DeepSeek and LLaMA directly from your browser.

PowerShell as Admin:

```
docker run -d ` 
-p 3000:8080 ` 
-e OLLAMA_BASE_URL=http://host.docker.internal:11434 ` 
-v open-webui:/app/backend/data ` 
--name open-webui ` 
--restart unless-stopped ` 
ghcr.io/open-webui/open-webui:main
```

Verification:

Open your browser and visit <http://localhost:3000/>

You should see the Open WebUI interface.

Log in or create a local user, then choose DeepSeek-R1 or LLaMA 3 from the model list to start chatting locally.