Multi-LM Tuner User Manual

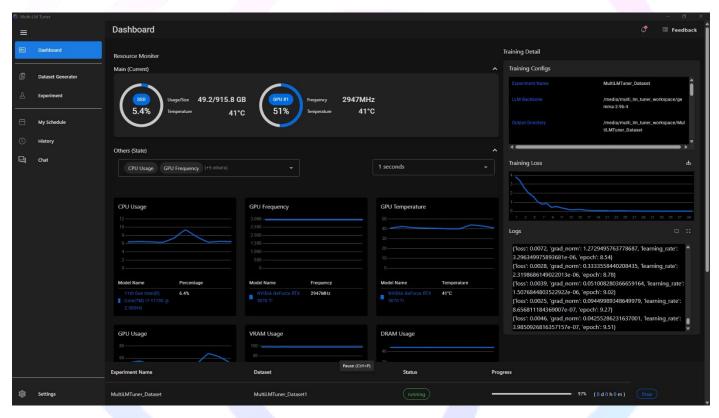
Version 1.2

2025/07



1. Intended Use

Multi-LM Tuner is a visual multimodal large language model (MLLM) fine-tuning tool developed by ASUS, primarily offering users simple, local, convenient, efficient, and fast-operation MLLM fine-tuning tool which is running on Windows.



Multi-LM Tuner

Multi-LM Tuner mainly has the following features:

- Multi-Model Support: Compatible with various large language models, allowing users to freely choose and fine-tune different models.
- **Local Fine-Tuning**: Fine-tune models locally to protect the privacy of users' and enterprises' information.
- **Easy Installation**: One-step installation process, eliminating the need for additional commands and operations.

- Intuitive Interface: No Code operation provides a simple and easy-to-understand user interface, making the fine-tuning training process more intuitive and easy to operate.
- **Optimized Settings**: Automatically assists users in setting the optimal fine-tuning training parameters without requiring technical expertise.
- **Efficient Fine-Tuning**: Utilizes efficient memory offloading technology to significantly enhance the speed and performance of fine-tuning training.
- **Training Scheduling**: Allows flexible adjustment of training start times to maximize the efficiency of training devices during off-peak hours.
- Real-Time Monitoring: Visual hardware performance display window enables clear monitoring of performance during the fine-tuning training process.
- Model List: Links to the list of models supported by Hugging Face, offering users more model choices.
- Validation Window: Provides a model testing interface that can load fine-tuned models for dialogue testing.
- **Fine-Tuning Review**: A fine-tuning review page to confirm details after the model fine-tuning training.
- Dataset Generation: Supports automatic dataset generation from files in PDF, TXT, DOC formats.

2. System Requirements

The following specifications are required to install and operate Multi-LM Tuner effectively:

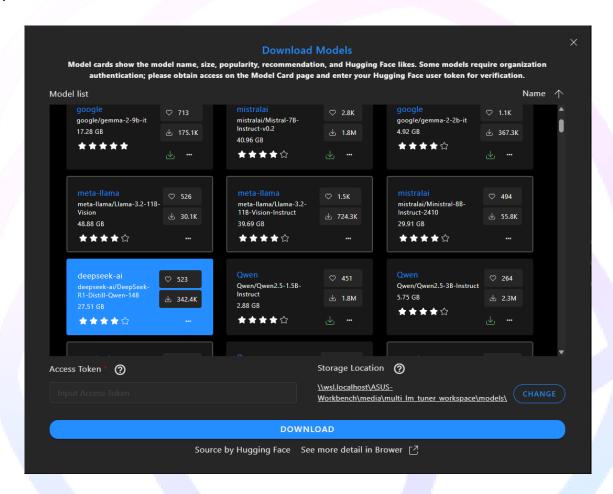
	Minimum	Recommended	Advanced
*Parameters	<1B	<8B	<14B
*Tuning Method	LoRA	LoRA	Full
Operating System	Windows 10	Windows 11	Windows 11
DRAM	32 GB	64 GB	128 GB
Graphics Card	ASUS GeForce RTX 5060TI 16 GB	ASUS GeForce RTX 5070TI 16 GB	ASUS GeForce RTX 5090 32 GB
Graphics Card PCle Ver.	4.0	5.0	5.0
Storage	500 GB SSD	500 GB SSD	1 TB SSD
Offload loading memory	M.2 500GB SSD	M.2 1 TB SSD	M.2 1 TB SSD

- This table provides a suggested configuration, which may vary depending on the pre-trained model used, as different models may require different training parameter recommendations.
- Requires a GPU with more than 16 GB of VRAM
- Please note that if you use an SSD as the primary offloading device, the heavy read/write operations

may significantly increase the SSD's TBW (Total Bytes Written), which could potentially void your SSD's warranty.

3. List of Supported Pre-trained Models

Before starting model fine-tuning with Multi-LM Tuner, users must first download a pretrained MLLM model. This can be done using the built-in Download Models feature (see image below), or by manually downloading models from Hugging Face or other third-party open platforms.



Download Models

Supported Model List:

Model	Model Name
Allen Al	allenai/OLMo-1B-0724-hf allenai/OLMo-7B-Instruct-hf
Baichuan	baichuan-inc/Baichuan2-7B-Chat baichuan-inc/Baichuan2-7B-Base baichuan-inc/Baichuan2-13B-Chat baichuan-inc/Baichuan2-13B-Base
BigCode	bigcode/starcoder2-3b

	bigcode/starcoder2-7b
	bigscience/bloomz-560m
	bigscience/bloomz-1b1
	bigscience/bloomz-1b7
BigScience	bigscience/bloomz-3b
	bigscience/bloomz-7b1
	bigscience/bloomz-7b1-mt
	deepseek-ai/deepseek-llm-7b-base
	deepseek-ai/deepseek-llm-7b-chat
	deepseek-ai/deepseek-coder-7b-base-v1.5
	deepseek-ai/deepseek-coder-7b-instruct-v1.5
DeepSeek	deepseek-ai/deepseek-moe-16b-chat
	deepseek-ai/deepseek-moe-16b-base
	deepseek-ai/DeepSeek-R1-Distill-Qwen-14B
	deepseek-ai/DeepSeek-R1-Distill-Llama-8B
	deepseek-ai/DeepSeek-R1-Distill-Qwen-7B
	deepseek-ai/DeepSeek-R1-Distill-Qwen-1.5B
	google/gemma-2b
	google/gemma-2b-it
	google/gemma-7b
	google/gemma-7b-it
	google/gemma-2-2b-it
	google/gemma-2-9b
	google/gemma-2-9b-it
	google/codegemma-7b
	google/codegemma-7b-it
Google	google/codegemma-1.1-2b
	google/codegemma-1.1-7b-it
	google/paligemma-3b-pt-224
	google/paligemma-3b-pt-448
	google/paligemma-3b-pt-896
	google/paligemma2-3b-pt-448
	google/paligemma2-3b-pt-896
	google/paligemma2-10b-pt-224
	google/paligemma2-10b-pt-448
	google/paligemma2-10b-pt-896
IBM	ibm-granite/granite-3.0-1b-a400m-base
	ibm-granite/granite-3.0-1b-a400m-instruct
	ibm-granite/granite-3.0-2b-base
	google/paligemma-3b-pt-896 google/paligemma2-3b-pt-448 google/paligemma2-3b-pt-896 google/paligemma2-10b-pt-224 google/paligemma2-10b-pt-448 google/paligemma2-10b-pt-896 ibm-granite/granite-3.0-1b-a400m-base ibm-granite/granite-3.0-1b-a400m-instruct

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	ibm-granite/granite-3.0-3b-a800m-base	
	ibm-granite/granite-3.0-3b-a800m-instruct	
	ibm-granite/granite-3.0-8b-base	
	ibm-granite/granite-3.0-8b-instruct	
	ibm-granite/granite-3.1-1b-a400m-base	
	ibm-granite/granite-3.1-1b-a400m-instruct	
	ibm-granite/granite-3.1-2b-base	
	ibm-granite/granite-3.1-2b-instruct	
	ibm-granite/granite-3.1-3b-a800m-base	
	ibm-granite/granite-3.1-3b-a800m-instruct	
	ibm-granite/granite-3.1-8b-base	
	ibm-granite/granite-3.1-8b-instruct	
IEIT-Yuan	IEITYuan/Yuan2-2B-hf	
	internlm/internlm3-8b-instruct	
	internlm/internlm2_5-1_8b	
	internlm/internlm2_5-1_8b-chat	
Internim	internlm/internlm2_5-7b	
	internlm/internlm2_5-7b-chat	
	internlm/internlm2_5-20b	
	internlm/internlm2_5-20b-chat	
	IndexTeam/Index-1.9B	
IndexTeam	IndexTeam/Index-1.9B-Chat	
	llava-hf/llava-1.5-7b-hf	
	llava-hf/llava-1.5-13b-hf	
	llava-hf/llama3-llava-next-8b-hf	
LLaVa	llava-hf/llava-v1.6-mistral-7b-hf	
	llava-hf/llava-v1.6-vicuna-7b-hf	
	llava-hf/llava-v1.6-vicuna-13b-hf	
	llava-hf/LLaVA-NeXT-Video-7B-hf	
	meta-llama/Llama-2-7b	
	meta-llama/Llama-2-13b	
	meta-Ilama/Meta-Llama-3-8B	
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	meta-Ilama/Llama-3.1-8B-Instruct	
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	meta-Ilama/Llama-3.2-1B meta-Ilama/Llama-3.2-3B	
	meta-llama/Llama-3.2-3B	

	meta-llama/Llama-3.2-11B-Vision-Instruct
	microsoft/phi-1_5
	microsoft/phi-2
	microsoft/Phi-3.5-mini-instruct
	microsoft/Phi-3.5-MoE-instruct
	microsoft/Phi-3.5-vision-instruct
Microsoft	microsoft/Phi-3-medium-4k-instruct
	microsoft/Phi-3-medium-128k-instruct
	microsoft/Phi-3-vision-128k-instruct
	microsoft/Phi-3-small-8k-instruct
	microsoft/Phi-3-small-128k-instruct
	microsoft/phi-4
	mistralai/Pixtral-12B-Base-2409
	mistralai/Pixtral-12B-2409
	mistralai/Ministral-8B-Instruct-2410
Mistral	mistralai/Mistral-Nemo-Base-2407
	mistralai/Mistral-Nemo-Instruct-2407
	mistralai/Mistral-7B-Instruct-v0.2
	openai-community/gpt2
OpenAl	openai-community/gpt2-large
	openai-community/gpt2-medium
	openai-community/gpt2-xl
	openbmb/MiniCPM3-4B
OpenBMB	openbmb/MiniCPM-o-2_6
	openbmb/MiniCPM-V-2_6
	Qwen/Qwen-1_8B
	Qwen/Qwen-1_8B-Chat
	Qwen/Qwen-7B
	Qwen/Qwen-7B-Chat
	Qwen/Qwen-14B
	Qwen/Qwen-14B-Chat
	Qwen/Qwen1.5-0.5B-Chat
Qwen	Qwen/Qwen1.5-1.8B
	Qwen/Qwen1.5-1.8B-Chat
	Qwen/Qwen1.5-4B
	Qwen/Qwen1.5-4B-Chat
	Qwen/Qwen1.5-7B
	Qwen/Qwen1.5-14B
	Qwen/Qwen1.5-14B-Chat
	Qwen/Qwen1.5-MoE-A2.7B-Chat

	Qwen/CodeQwen1.5-7B-Chat
	Qwen/Qwen2-0.5B-Instruct
	Qwen/Qwen2-1.5B
	Qwen/Qwen2-1.5B-Instruct
	Qwen/Qwen2-7B
	Qwen/Qwen2-7B-Instruct
	Qwen/Qwen2-Math-1.5B-Instruct
	Qwen/Qwen2-Math-7B
	Qwen/Qwen2-Math-7B-Instruct
	Qwen/Qwen2.5-0.5B-Instruct
	Qwen/Qwen2.5-1.5B
	Qwen/Qwen2.5-1.5B-Instruct
	Qwen/Qwen2.5-3B
	Qwen/Qwen2.5-3B-Instruct
	Qwen/Qwen2.5-7B
	Qwen/Qwen2.5-7B-Instruct
	Qwen/Qwen2.5-14B
	Qwen/Qwen2.5-14B-Instruct
	Qwen/Qwen2.5-Coder-0.5B-Instruct
	Qwen/Qwen2.5-Coder-1.5B
	Qwen/Qwen2.5-Coder-1.5B-Instruct
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	Qwen/Qwen2-VL-2B-Instruct
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	Qwen/Qwen2-VL-7B-Instruct
	Qwen/Qwen2.5-VL-3B-Instruct
	Qwen/Qwen2.5-VL-7B-Instruct
Skywork	Skywork/Skywork-o1-Open-Llama-3.1-8B
Tele AI	Tele-AI/TeleChat2-3B
	THUDM/chatglm3-6b
тнирм	THUDM/glm-4-9b
	THUDM/glm-4-9b-chat

	1
TIIUAE	tiiuae/falcon-7b
	tiiuae/falcon-7b-instruct
	tiiuae/falcon-11B
	tiiuae/falcon-11B-vlm
	xverse/XVERSE-7B
	xverse/XVERSE-7B-Chat
Xverse	xverse/XVERSE-13B
	xverse/XVERSE-13B-Chat
	01-ai/Yi-6B
	01-ai/Yi-9B
	01-ai/Yi-6B-Chat
	01-ai/Yi-1.5-6B
	01-ai/Yi-1.5-6B-Chat
01.AI	01-ai/Yi-1.5-9B
OI.AI	01-ai/Yi-1.5-9B-Chat
	01-ai/Yi-Coder-1.5B
	01-ai/Yi-Coder-1.5B-Chat
	01-ai/Yi-Coder-9B
	01-ai/Yi-Coder-9B-Chat
	01-ai/Yi-VL-6B

4. Installation Guide

Set VT(Virtualization Technology) in BIOS:

Before Installing Multi-LM Tuner, please ensure that virtualization is enabled in your motherboard BIOS settings before installing Multi-LM Tuner.

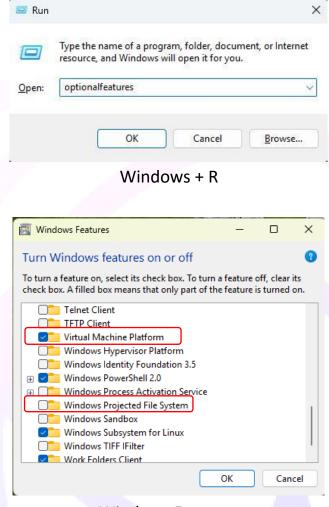
You can refer to the following link for instructions on how to check and enable virtualization: https://www.asus.com/support/faq/1045141/

Confirm that the "Virtual Machine Platform" and "Windows Subsystem for Linux" features are enabled in Windows:

Follow the steps below to enable the Virtual Machine Platform and Windows Subsystem for Linux features on your Windows system:

- Open Windows Features:
 Press Windows + R, type "optionalfeatures", and press Enter.
- 2. Enable the Required Features: In the Windows Features window, scroll down and check:
 - Virtual Machine Platform

Windows Subsystem for Linux
 Click OK and restart your computer if prompted.



Windows Features

Installer download:

If your graphics card supports Multi-LM Tuner, you can download the installer from the official product page.

- 1. Go to your graphics card's product page.
- 3. Navigate to the Support tab.
- 4. Click on Driver & Tools.
- 5. Select Windows 11 64-bit as your operating system.
- Under Software and Utility, locate Multi-LM Tuner and click Download to get the installer.

Multi-LM Tuner installer v0.2.1.53 for Windows 11 64-bit.

版本 0.2.1.53 316 MB 2025/06/17

SHA-256:D7752D6FB8E280C90E3773EDCCECA23A68BC43440DEE156DC9F1AA92E7167AA3

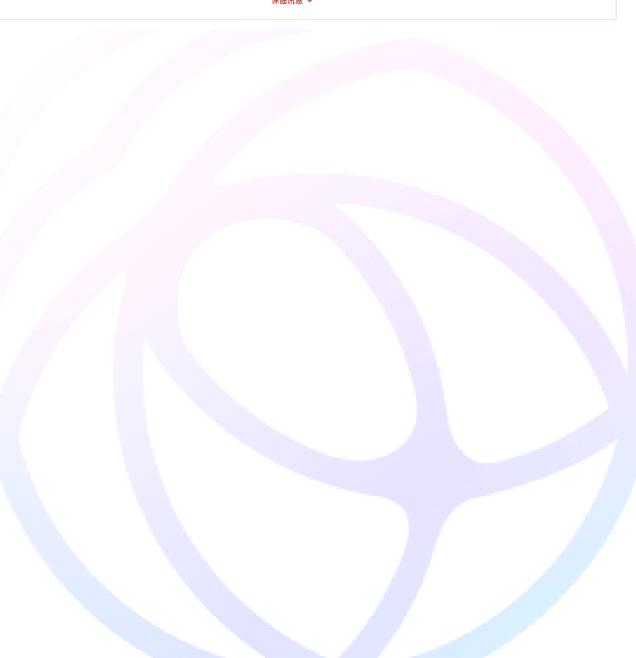
Name: Multi-LM Tuner_installer_0.2.1.53.exe Size: 331353495 bytes (316 MiB)

This version is the initial release of the Multi-LM Tuner, offering features such as a Hardware Resource Dashboard, Dataset Generator,

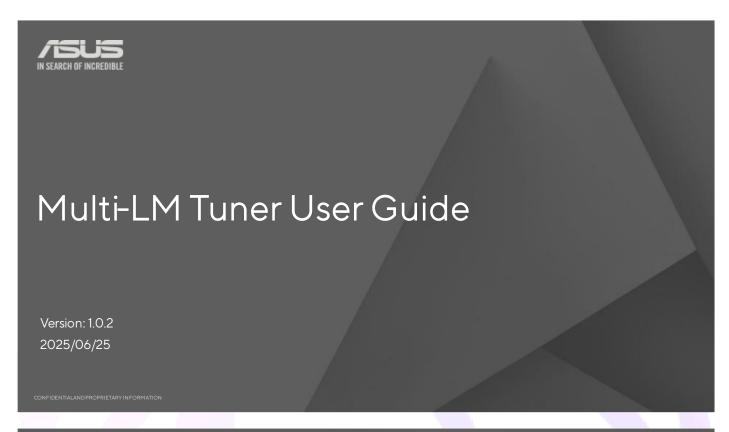
Model Download List, One-Click Fine-Tuning, Offloading Strategy, SSD Capability Verification, Scheduler, History, and Chatbot.

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DOWNLOAD



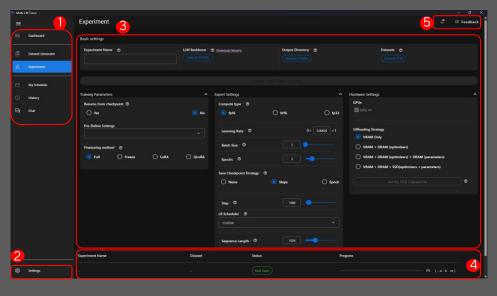
5. Multi-LM Tuner User Guide





Main Page

- 1. Menu Panel
- 2. Settings
- 3. Content of Functions
- 4. Experiment Progress Bar
- 5. Alarm and Feedback

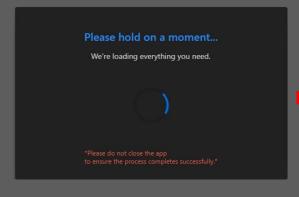




Run Multi-LM Tuner

When you run the Multi-LM Tuner, a pop-out window will appear on the screen saying "Please hold on a moment

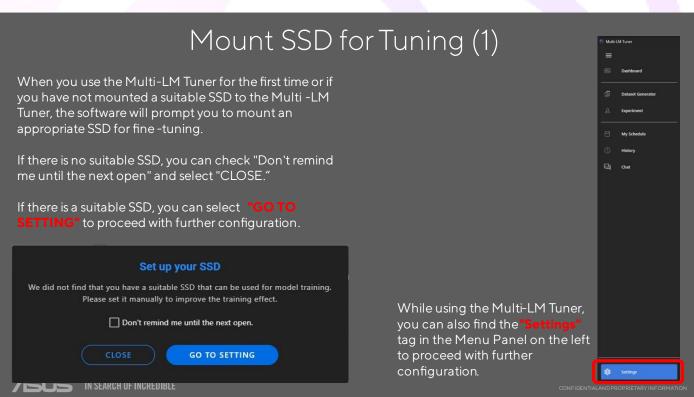
Since Multi-LM Tuner will use PowerShell to control Windows Subsystem for Linux (WSL), it will require your assistance to grant control permissions. Please select "Yes.





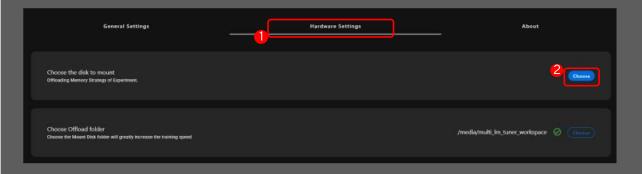






Mount SSD for Tuning (2)

- 1. In the "Settings" tag, select the "Hardware Settings" tab.
- 2. Select the "Choose" button for "Choose the disk to mount."





Mount SSD for Tuning (3)



- 1. Choose the disk
- 2. Click "Mount" button to mount the disk you selected.





- 1. Choose the partition you want to use for tuning.
- 2. If you are using this partition for the first time, it is recommended to format it to EXT4 format.
- 3. Click "Mount" button to mount the Partition you selected.

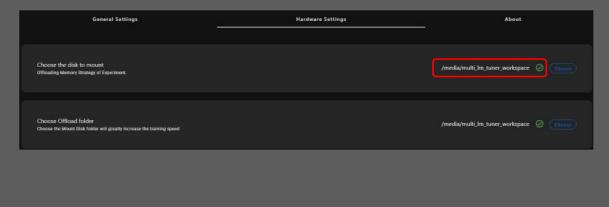


Click "OK" button to complete the SSD mount action

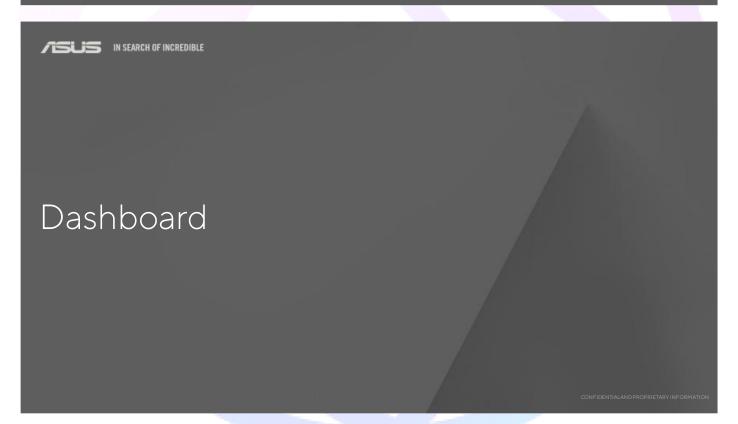
ONFIDENTIALAND PROPRIETARY INFORMATION

Mount SSD for Tuning (4)

When an SSD is mounted to the Multi-LM Tuner, the default path will be automatically generated.







Dashboard (1)

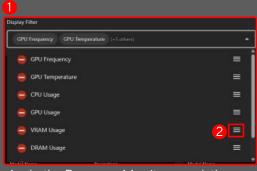
In the **Dashboard** panel, Multi-LM Tuner shows Training Detail, Training Loss trend, Logs, and the usage status of hardware resources, such as temperature and usage of SSD and graphics card.

- Shows the current status of hardware resources and usage.
- 2. Shows the Training Detail, Training Loss trend, and Logs.

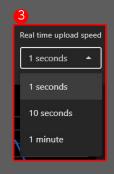




Dashboard (2)



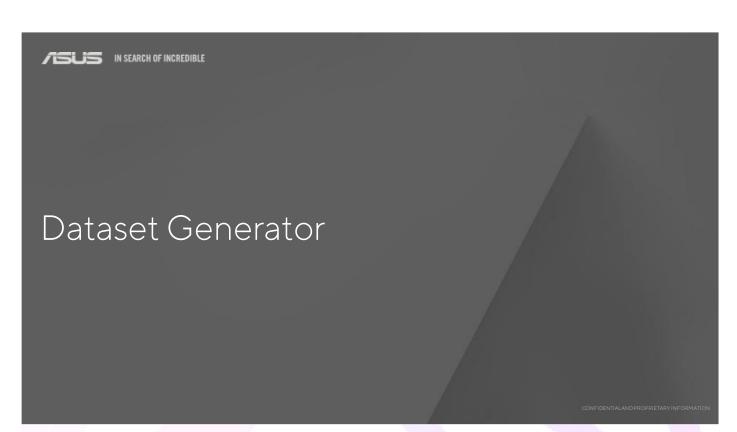
1. In the Resource Monitor panel, the order of monitored hardware resource can be manually arranged by dragging right icon (2). \equiv

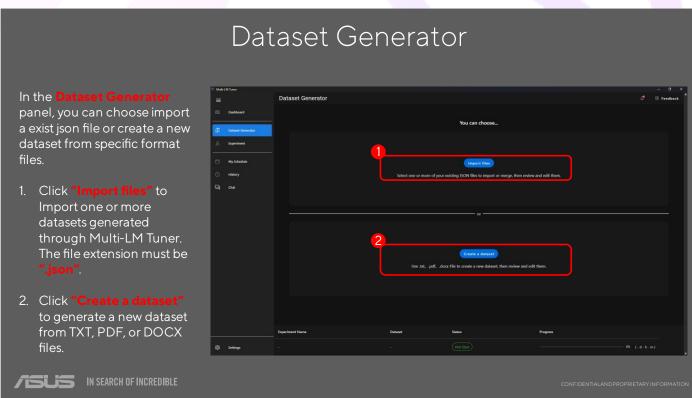


3. In the Resource Monitor panel, you can manually adjust the update time of the graphs showing hardware resources.



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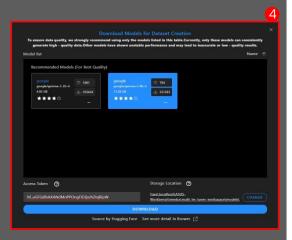


Dataset Generator: Create a dataset (1)

1. Click "Create a dataset" to generate a new dataset from TXT, PDF, or DOCX files.



- MultiLMTuner_Dataset Where to save * 👩 /media/multi_lm_tuner_workspace/ dataset 🕢 Select LLM Model® @ Download Models /media/multi_lm_tuner_workspace/ gemma-2-9b-it 🥥 IN SEARCH OF INCREDIBLE
- 2. Enter the file name for the dataset.
 - 3. Select the path where the dataset will be saved.
 - 4. Download the pre-trained model used for generating the dataset. If the model has already been downloaded, you can skip this step.
 - 5. Select the path where the model is located.
 - to finish the configuration.



Dataset Generator: Create a dataset (2)



2. Click "Import File" to open file dialog.



3. Choose supported files (.txt, .pdf, .docx), and click



4. You can remove unwanted files by clicking the "X" on the right.



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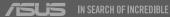
Dataset Generator. Create a dataset (3)



- 1. Click "..." to further configure the parameters for generating a dataset from each file.
- 2. Set Number of QA:

Specify the total number of question-answer pairs to generate for this run.

Auto: The system will automatically determine a suitable number of Q&A pairs based on content. User defined: The user manually specifies the desired number of Q&A pairs.



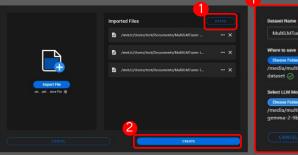


3. Set Chunk size & Overlap: Define how the original text is split into chunks before QA generation. Proper chunking ensures that the model has enough context while keeping inputs within token limits. Description.

Chunk Size: The maximum number of tokens in each chunk (tokens are roughly equivalent to words or sub words). Too small may lack context; too large may hit model limits. Common values: 256, 512, 1024.

Overlap: The number of tokens shared between consecutive chunks. This helps preserve sentence continuity and prevents questions from being generated on incomplete thoughts.

Dataset Generator: Create a dataset (4)





- 1. Click "DETAIL" to further confirm settings of the generated dataset.
- 2. Click "CREATE" to generate a new dataset. The time required to generate the dataset will vary depending on the size of the input data.
- 3. After the dataset is generated, you can choose "EXPORT JS **G"** to save a dataset file directly,
- **EDITING**" to save a dataset file directly, 4. or "GO EDIT" to edit the content of the generated dataset.

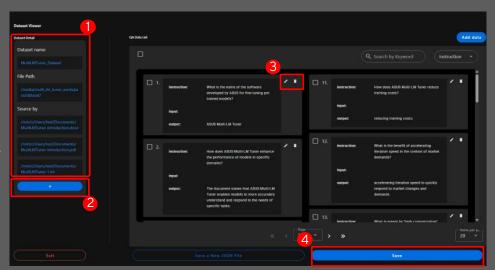




Dataset Generator: Create a dataset (5)

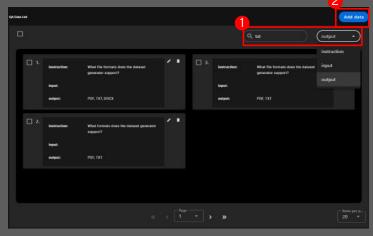
"GO EDIT" button

- 1. The source files used for generation will be displayed in the information panel on the left.
- 2. Click "+" to add an existing .JSON file into the dataset.
- 3. Each QA listed in the dataset can be edited and removed by selecting the icon in the upper right corner.
- ve" to save all 4. Click "S changes into the dataset.









- 1. Use keywords to search for QA items in the dataset within the instruction, input, or output."
- Click "Add data" to create a QA item.
 Click "ADD TO QA DATA LIST" to add QA item into the dataset.



