Llama 3.2

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Demo Environment

Development Board: Jetson Nano

SD (TF) Card: 64GB

```
Recommended for models with 4 Bytes or fewer parameters.
```

Meta Llama 3.2 is a series of advanced, open-source large-scale language models (LLMs) developed by the Meta AI department.

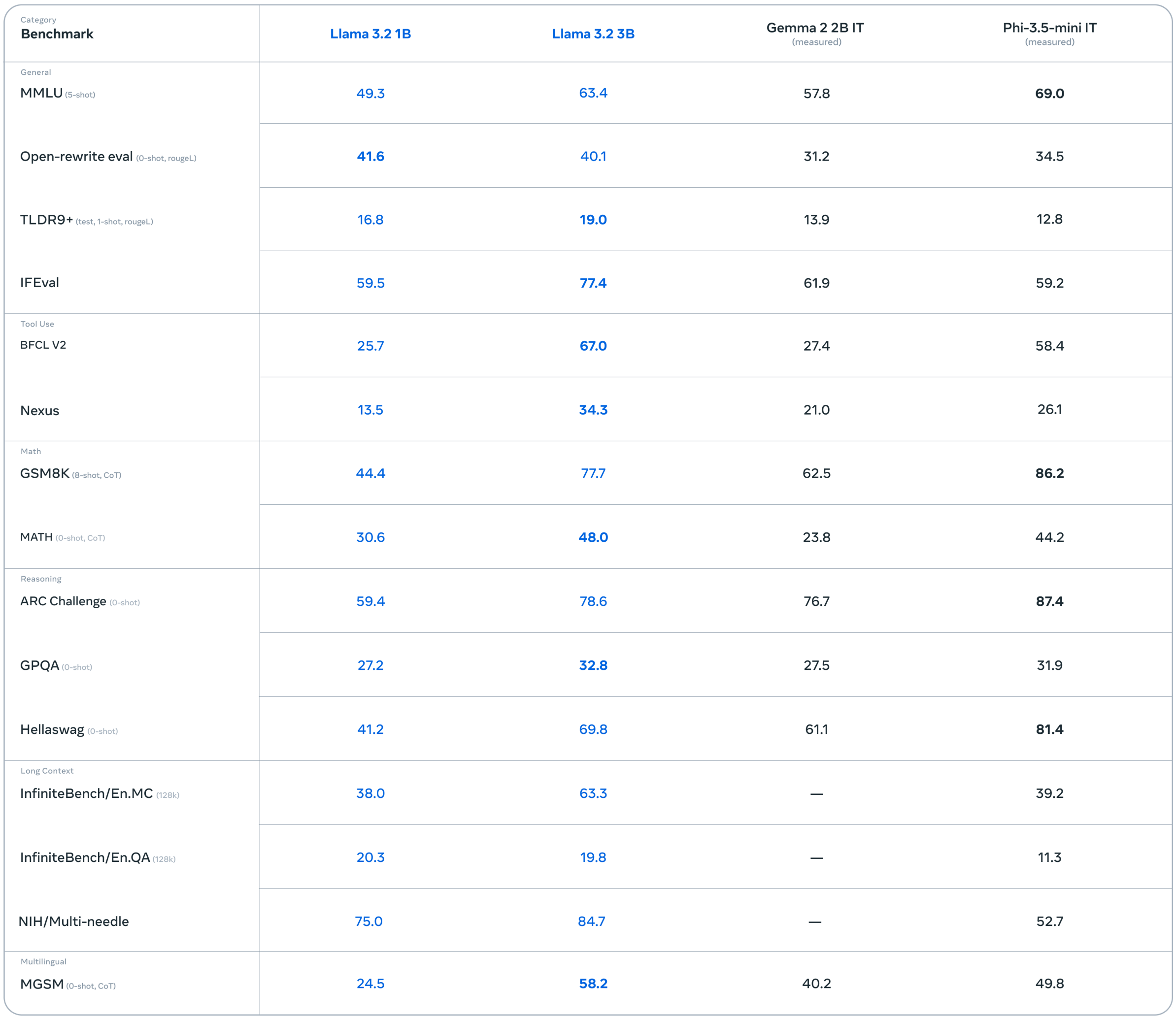
Model Storage Location

```
/usr/share/ollama/.ollama/models
```

1. Model Size

Model	Volume
llama3.2:1b	1.3GB
llama3.2:3b	2.0GB

2. Performance



Lightweight instruction-tuned benchmarks

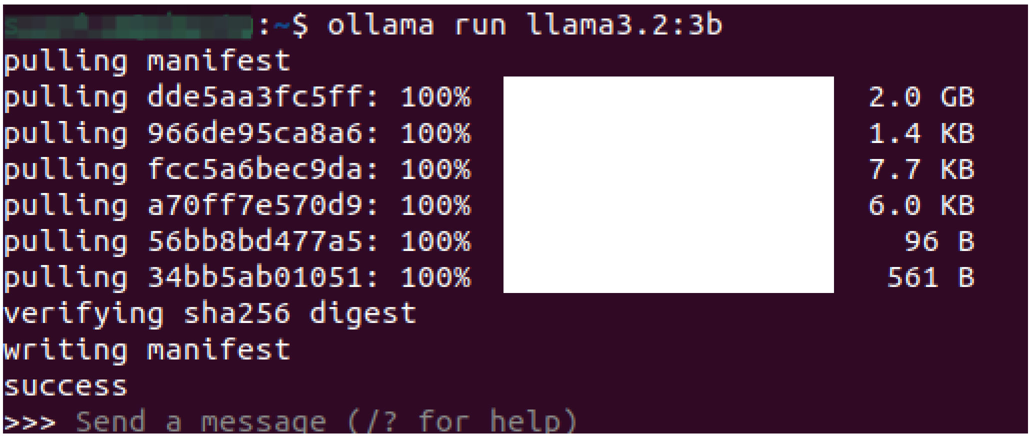
Category Benchmark	Llama 3.2 1B	Llama 3.2 3B	Gemma 2 2B IT (measured)	Phi-3.5-mini IT (measured)
General MMLU (5-shot)	49.3	63.4	57.8	**69.0**
Open-rewrite eval (0-shot, rougeL)	**41.6**	40.1	31.2	34.5
TLDR9+ (test, 1-shot, rougeL)	16.8	**19.0**	13.9	12.8
IFEval	59.5	**77.4**	61.9	59.2
Tool Use BFCL V2	25.7	**67.0**	27.4	58.4
Nexus	13.5	**34.3**	21.0	26.1
Math GSM8K (8-shot, CoT)	44.4	77.7	62.5	**86.2**
MATH (0-shot, CoT)	30.6	**48.0**	23.8	44.2
Reasoning ARC Challenge (0-shot)	59.4	78.6	76.7	**87.4**
GPQA (0-shot)	27.2	**32.8**	27.5	31.9
Hellaswag (0-shot)	41.2	69.8	61.1	**81.4**
Long Context InfiniteBench/En.MC (128k)	38.0	63.3	—	39.2
InfiniteBench/En.QA (128k)	20.3	19.8	—	11.3
NIH/Multi-needle	75.0	84.7	—	52.7
Multilingual MGSM (0-shot, CoT)	24.5	**58.2**	40.2	49.8

3. Using Llama 3.2

3.1 Running Llama 3.2

Use the run command to start running the model. If the model is not already downloaded, it will automatically pull the model from the Ollama model library:

```
ollama run llama3.2:3b
```

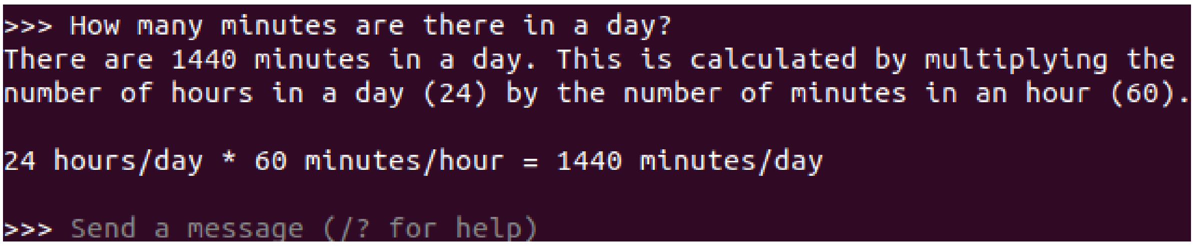


```
[redacted]:~$ ollama run llama3.2:3b
pulling manifest
pulling dde5aa3fc5ff: 100%                      2.0 GB
pulling 966de95ca8a6: 100%                      1.4 KB
pulling fcc5a6bec9da: 100%                      7.7 KB
pulling a70ff7e570d9: 100%                      6.0 KB
pulling 56bb8bd477a5: 100%                        96 B
pulling 34bb5ab01051: 100%                       561 B
verifying sha256 digest
writing manifest
success
>>> Send a message (/? for help)
```

3.2 Starting a Conversation

```
How many minutes are there in a day?
```

Response time depends on your hardware configuration, so please be patient!



```
>>> How many minutes are there in a day?
There are 1440 minutes in a day. This is calculated by multiplying the
number of hours in a day (24) by the number of minutes in an hour (60).

24 hours/day * 60 minutes/hour = 1440 minutes/day

>>> Send a message (/? for help)
```

3.3 Ending a Conversation

Use the `Ctrl+d` shortcut or `/bye` to end a conversation!

References

Ollama

Official Website: https://ollama.com/

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

Llama 3.2

Official Website: https://www.llama.com/docs/model-cards-and-prompt-formats/llama3_2/

Ollama Model: https://ollama.com/library/llama3.2