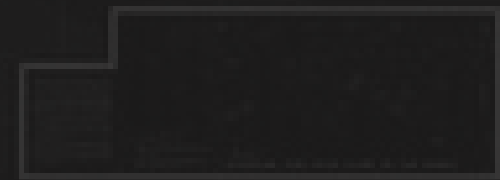


Can **LLaMA** understand German?



Can LLaMA understand German ?

Language	Percent	Language	Percent
en	89.70%	uk	0.07%
unknown	8.38%	ko	0.06%
de	0.17%	ca	0.04%
fr	0.16%	sr	0.04%
sv	0.15%	id	0.03%
zh	0.13%	cs	0.03%
es	0.13%	fi	0.03%
ru	0.13%	hu	0.03%
nl	0.12%	no	0.03%
it	0.11%	ro	0.03%
ja	0.10%	bg	0.02%
pl	0.09%	da	0.02%
pt	0.09%	sl	0.01%
vi	0.08%	hr	0.01%

Can **LLaMA** understand German ?

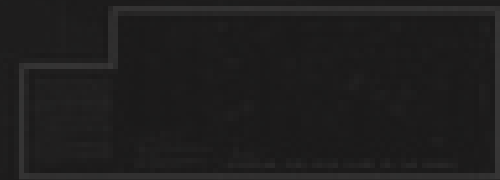
Possible solutions

- **Hope and wait** that the original authors will support more languages
- **Find** fine-tuned versions
- **Fine-tune** the models myself
- Use *prompt engineering*

Other possible **Llms**

Llama-2-13b-chat-german - a fine tuned version of llama

German Bert

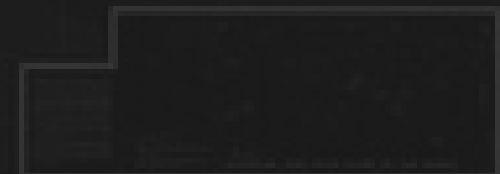


Which is “better”?

Llama-2-13b-chat-german - a fine tuned version of llama

VS.

German Bert



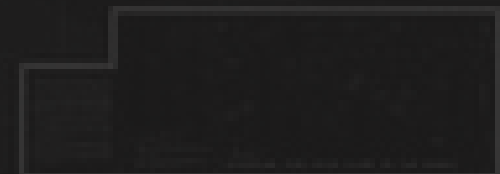
Which is “better”?

winner

Llama-2-13b-chat-german - a fine tuned version of llama

VS.

German Bert



Requirements

computing power?

to train?

tech?

to fine-tune?

What resources are needed to do what?

system needs?

to NLP?

Hardware?

to test?



Requirements

Task	Possible with Average Device	Not Possible with Average Device
<i>Training Models</i>	Can run smaller or simplified models.	Training large models from scratch.
<i>Fine-Tuning</i>	Limited fine-tuning on smaller datasets.	Extensive fine-tuning on large datasets.
<i>NLP Tasks</i>	Basic tasks like tokenization, stemming.	Advanced NLP tasks like deep semantic parsing.
<i>Testing</i>	Suitable for basic testing and prototypes.	Comprehensive testing of complex model behaviors.

