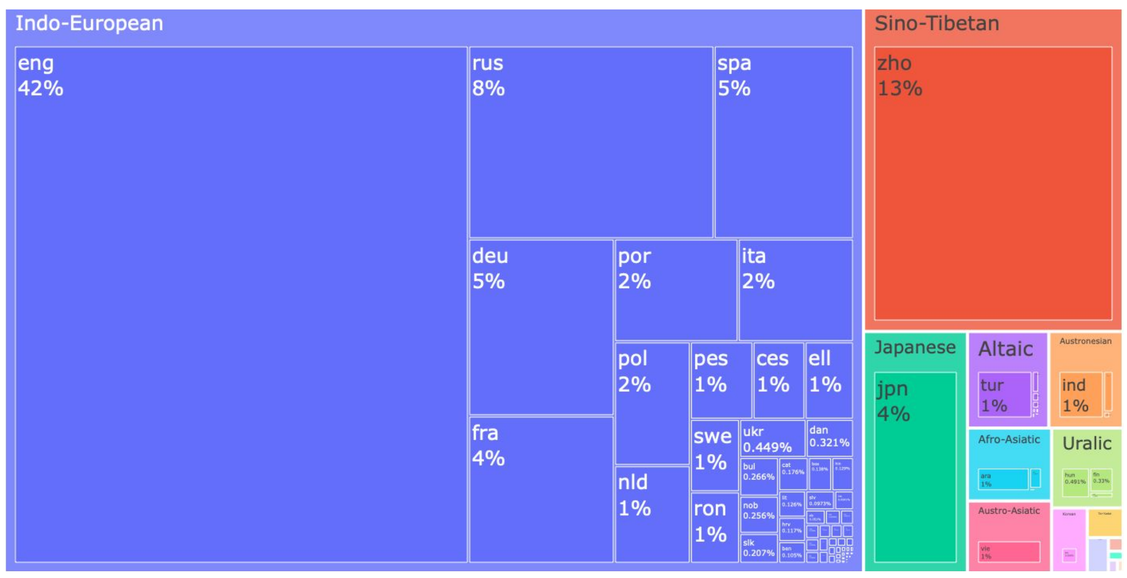
HPLT v2 is a massive open corpus of high-quality textual training data, covering 193 languages.

Background: Training state-of-the-art large language models requires **vast amounts of clean and diverse textual data.** However, there is a lack of the **open multilingual datasets** we need for research.

The HPLT v2 datasets

✨ **20TB** of clean data, permissive **CC0 license**

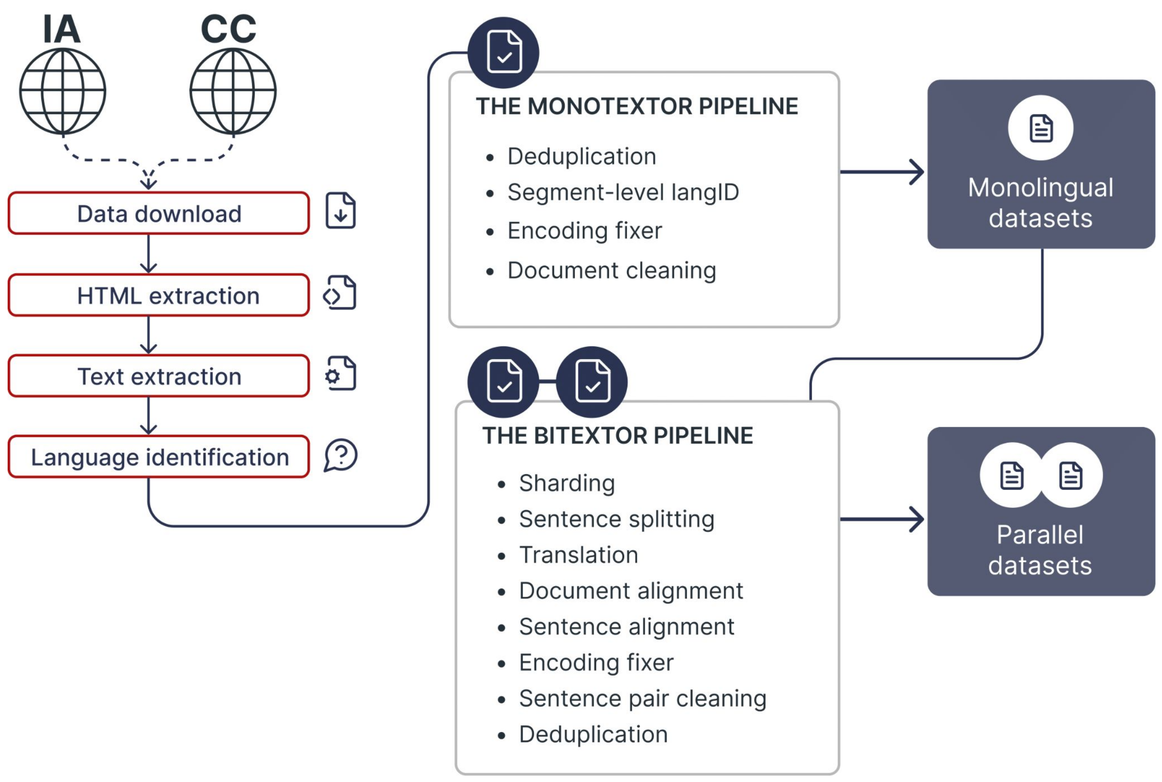
- **Monolingual:** 8 trillion tokens, 193 languages
- **Parallel:** 380M pairs, 50 languages X-En
- **DocHPLT v2:** 74M docs, 50 languages X-En
- **MultiHPLT v2:** 16.7B tokens, 1275 lang. pairs



Distribution of docs. in HPLT v2 monolingual cleaned corpora

Construction pipeline

Source: 4.5PB web crawl data (3.7 from IA, 0.8 from CC)
✨ HPLT is the **only** large-scale text collection extracted from IA.



Analysis and evaluation: demonstrating **quality** (much more in paper!)

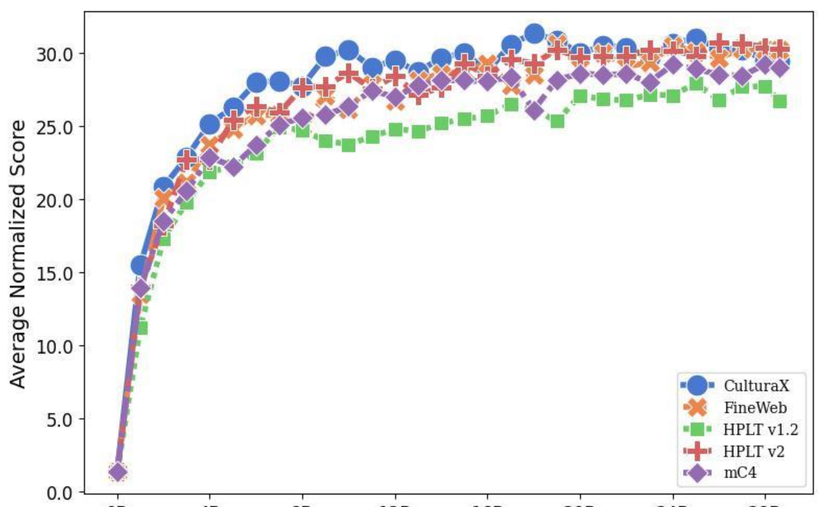
Manual data inspection

We inspected 50 randomly selected documents in 22 languages.

- <1% pornographic content
- 3% not target language
- 10% unnatural text

⇒ Pipeline works well and results in high-quality data

NLU tasks and large generative LMs



Performance for LLMs trained on Norwegian

⇒ HPLT v2: competitive and stable

Machine translation

	xx-en		en-xx	
	BLEU	COMET	BLEU	COMET
HPLT v1.2	28.5	0.7943	24.4	0.7623
HPLT v2	**32.7**	**0.8343**	**27.9**	**0.8137**
HPLT v2	28.7	0.8144	23.4	0.7941
OPUS	29.6	0.8142	23.4	0.8074
HPLT v2+OPUS	**30.5**	**0.8237**	**24.2**	**0.8083**

Table 3: Average scores for the HPLT v1.2 and v2 comparison (top) and HPLT v2 as a complimentary resource to OPUS (bottom). Only numbers that are available for all models in a comparison are averaged.

⇒ Improvement over HPLT v1.2, complementary to existing data

An Expanded Massive Multilingual Dataset for High-Performance Language Technologies (HPLT)

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