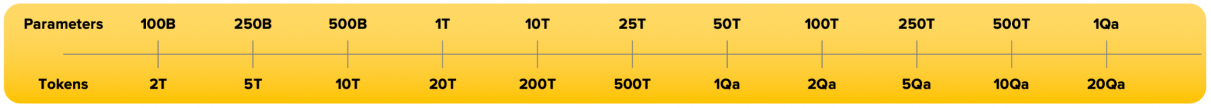
LIFEARCHITECT.AI

Report Card for Amazon AlexaTM 20B for August, 2022

Model size

🔽20B parameters



🔼*1.3T tokens*

Technical

SUBJECT	GRADE	REMARKS
Model size	C	*At 20B parameters, AlexaTM 20B is at or below standard for prototype models in mid-2022. However, the model size is in line with Chinchilla scaling.*
Optimization	A	*AlexaTM 20B seems to follow and even outdo Chinchilla scaling laws using 1T tokens for 20B parameters, but seq2seq model type is not directly comparable with decoder-only.*
Dataset	C	*The paper is slightly opaque in its dataset, but mentions Wikipedia at 119B tokens and multilingual C4 (mC4) at 1.2T tokens.*
Special	-	*Not applicable.*

Behavioral

SUBJECT	GRADE	REMARKS
Performance	C+	*SOTA on selected multilingual tasks. SOTA on 1-shot summarization (outperforming PaLM 540B), and 1-shot machine translation.*
IQ	D	*Outperforms GPT-3 zero-shot on SuperGLUE (GPT-3=57.2 vs AlexaTM=69.16), may be ranked #24 on the current leaderboard Aug/2022.*
Truthfulness	-	*Not enough data disclosed in the paper.*
Openness	A	*Amazon Alexa AI confirms: We will release the AlexaTM 20B model [non-commercial] on https://github.com/amazon-research/alexa-teacher-models*

Overall grade and remarks

Amazon Alexa AI's latest AlexaTM 20B (Teacher Model) is a multilingual model exploring the alternative sequence-to-sequence (seq2seq) approach for model training.

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REPORT CARD MARKING KEY
v1 (20220707)

This report card marking key is designed to be as objective as possible, but grades are still a subjective measure. All grades are indicative of comparative performance within the date period noted in the header. For example, on full public release in November 2019, GPT-2 may have received a grade of B on its report. As of July 2022, that report grade may be equivalent to a D, and would not be directly comparable to current models in the current period.

Model size (Parameter count)	A: Very large; within state of the art for models trained to convergence. B: Large; within 25% of the size of top models. C: Average size. D: Below average size. F: Smaller than 90% of models.
Optimization (Efficiency)	A: Aligned with Chinchilla optimization (1 parameter per 20 tokens). B: Close to Chinchilla optimization. C-F: Poor use of tokens in training.
Dataset (Corpora)	A-B: Large, diverse, uncensored. C-F: Discrepancies, monotone, or poor selection of data.
Special (Other)	A-B: The model has a unique and special feature. C-F: The model does not exploit unique or special features.
Performance (Ranking)	A-B: High performance on major benchmarks. C-F: Low benchmark ranking or other low results.
IQ (Smarts)	A-B: High scores on major intelligence subtests like SuperGLUE. C-F: No remarkable performance.
Truthfulness (Groundedness)	A-B: Truthful, honest, grounded. C-F: Overly hallucinative and low truth rating.
Openness (Availability)	A: The model/data is available for download, with a permissive license. B: The trained model is available for download, with a permissive license. C: The model is available to the public via an API. D: The model excludes most of the public, or the demo is stunted. F: The model is closed to the public (internal research only).
Overall grade (Total)	Average of all graded subjects for this model in the noted date period.