The State of the “Open” AI:
Exploring Data on AI Model Releases

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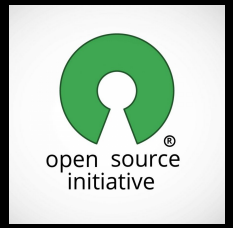

Study: The state of “open” AI

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- Analyze key trends in “open” AI model releases

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Not

- Evaluate models for “openness”
- Evaluate the Open Source AI Definition (OSAID 1.0)

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    - Large labs (Alibaba, Deepseek, Google, Meta, Microsoft, Mistral, XAI, Open AI)
    - (N=2,028)
- **Quantitative and qualitative** analysis using Python

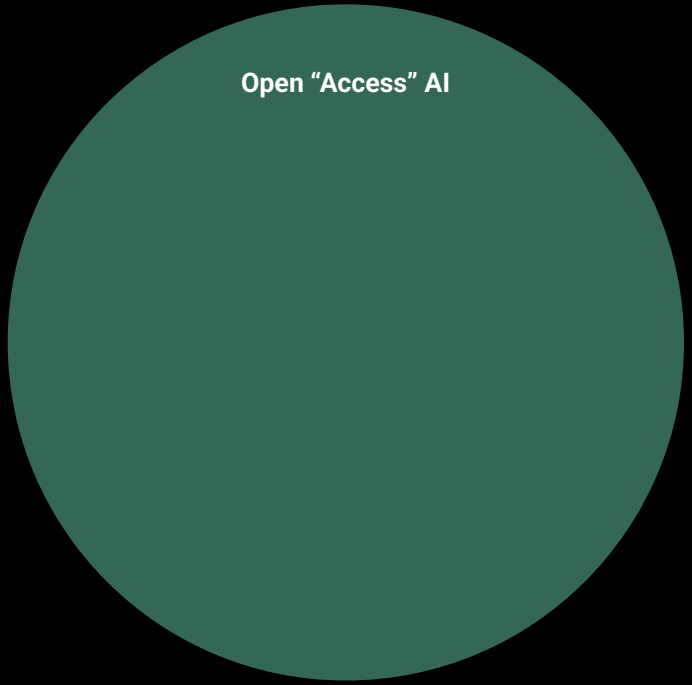
Key Findings

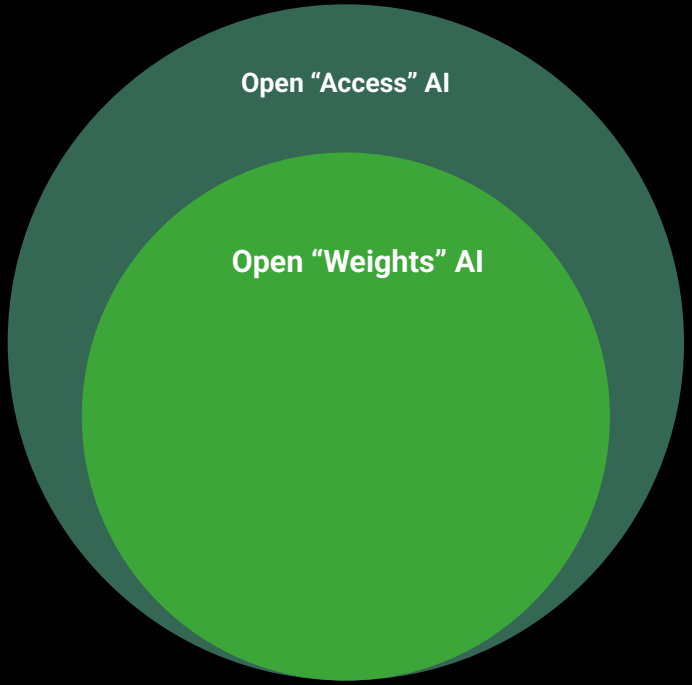
- The overwhelming majority of “open” models are based on larger models
- Apache 2.0 is the most popular OSI-approved license, followed by MIT
- CC-by licenses are prevalent, despite Creative Commons’ recommendations against using CC licenses for software
- The vast majority, over 50% of all models in in this sample, are released with an “unknown license”
- Alibaba’s Qwen family of models are the most popular base model in this sample
- **Custom licenses like Qwen, Llama, Gemma, Grok, OpenRAIL are becoming increasingly common, specially for flagship models, yet impose usage restrictions**

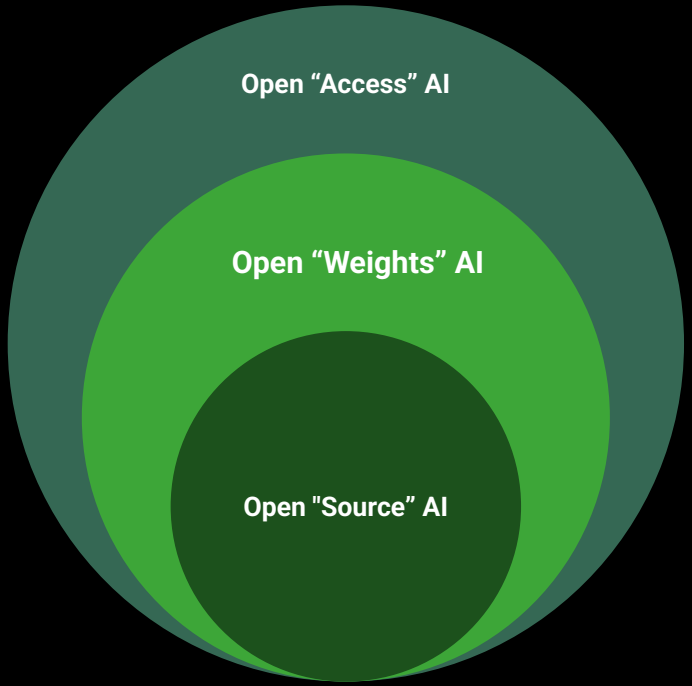
The Open Source AI Definition (OSAID) 1.0

OSAID 1.0

1	**Data Information**	• Under OSI-approved terms • Complete description of all data • Description of where to obtain public and private data
2	**Code**	• Under OSI-approved licenses • Training as well as data cleaning & prep code • Model architecture, supporting libraries
3	**Parameters**	• Under OSI-approved terms • Ideal both, final and intermediate states • Weights and configuration settings


Open “Access” AI


Open “Access” AI
Open “Weights” AI


Open “Access” AI
Open “Weights” AI
Open "Source” AI

Open Weights vs OSAID 1.0

Feature	Open Weights	Open Source AI
Weights & Biases	Released	Released
Training Code	Not Shared	Fully Shared
Intermediate Checkpoints	Withheld	Nice to have
Training dataset	Not Shared/Not disclosed	Released*
Training Data Composition	Partially/Not Disclosed	Fully Disclosed

*when legally allowed

Key Findings

Validated Systems as of 2024

- Pythia (Eleuther AI), OLMo (AI2), Amber and CrystalCoder (LLM360), and T5 (Google).

Systems that could pass if licenses were different

- BLOOM (BigScience), Starcoder2 (BigCode), Falcon (TII).

Systems that did not pass:

- Llama2 (Meta), Grok (X/Twitter), Phi-2 (Microsoft), Mixtral (Mistral).

Licenses

“Open” Models

License	Model Count	Proportion (%)	Cumulative (% of total)
unknown	11786	58.72	58.72
apache-2.0	4697	23.4	82.13
mit	1086	5.41	87.54
other	814	4.06	91.59
llama-family	660	3.29	94.88
cc-by-4.0	229	1.14	96.02
cc-by-nc-4.0	222	1.11	97.13
creativeml-openrail-m	111	0.55	97.68
openrail	72	0.36	98.04
cc-by-nc-sa-4.0	67	0.33	98.38

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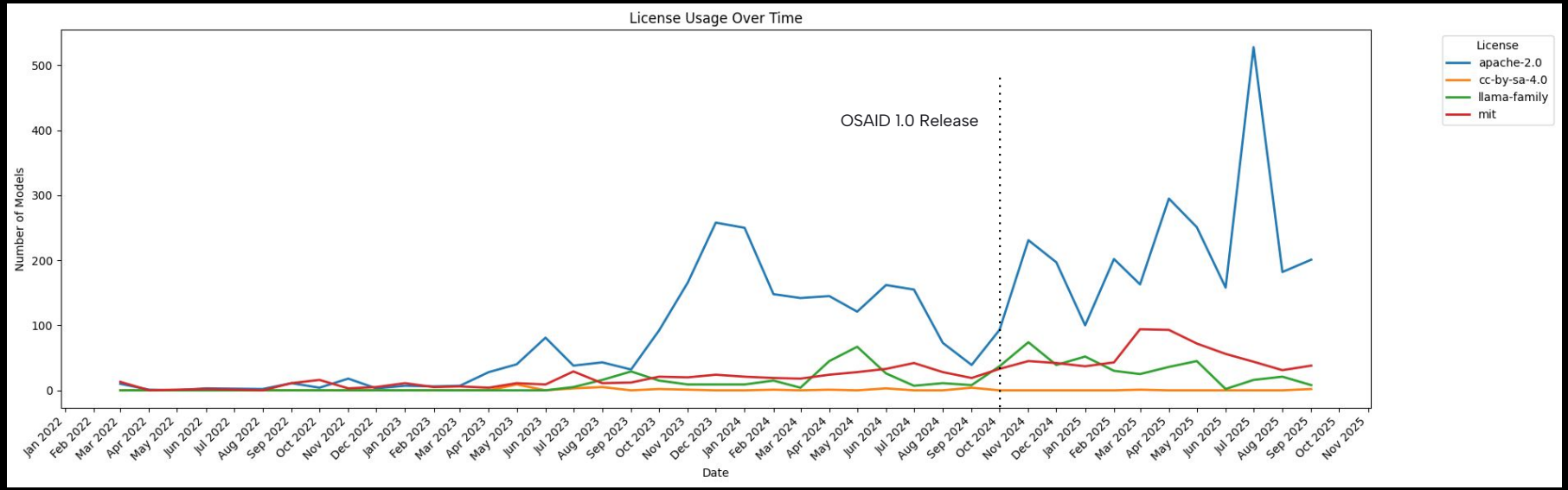
License	Model Count	Proportion (%)	Cumulative (% of total)
unknown	36	52.94	52.94
apache-2.0	19	27.94	80.88
mit	8	11.76	92.65
llama-family	3	4.41	97.06
cc-by-nc-sa-4.0	2	2.94	100

License Use Over time
January 2022 – October 2025



Number of Model Releases Over time
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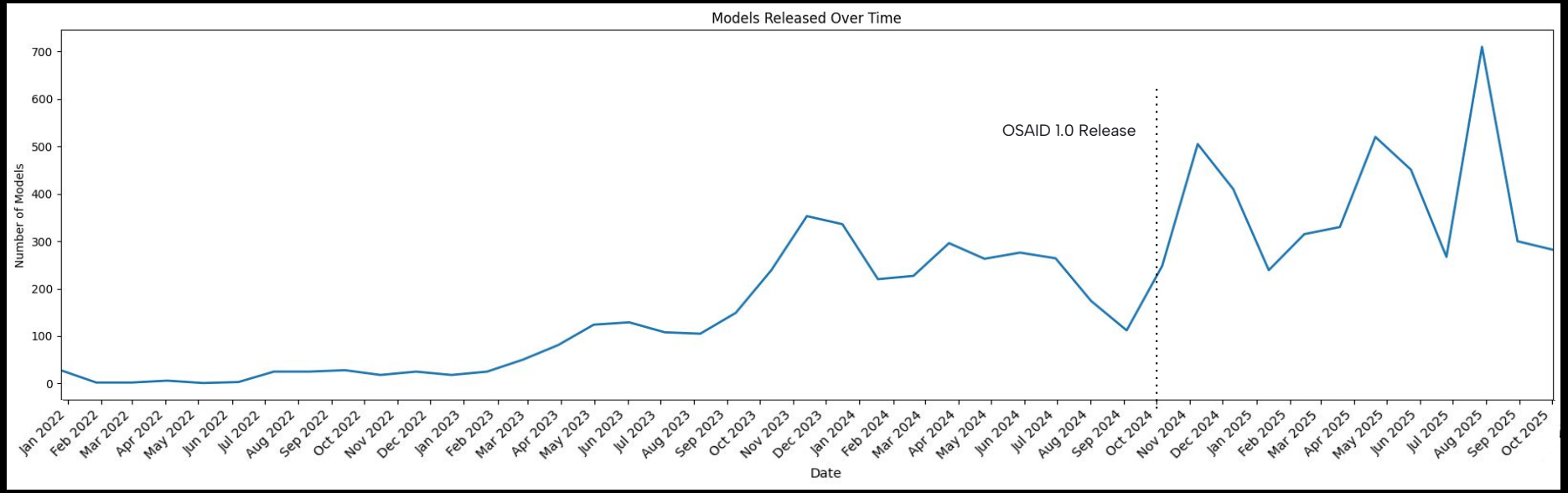

Prominent Organizations

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Alibaba (Qwen)

- +300 models
- Apache 2.0, Qwen

DeepSeek

- 78 models
- MIT for code, Deepseek for model

Meta (Llama)

- 70 models
- Llama-family of licenses

Mistral

- 39 models
- Apache 2.0

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Mistral

- 39 models
- Apache 2.0

Microsoft

- +400 models
- MIT, Apache, cc-by-*, Microsoft Research License

Google

- + 1000 models
- Apache 2.0, and Gemma licenses

XAI (Grok)

- 2 models
- Grok-1 under Apache 2.0, Grok-2 under Grok-2 license

OpenAI

- 30 models
- Apache 2.0

Prominent Organizations

Model Name	Number of Child Models
Qwen/Qwen2.5-1.5B-Instruct	342
Qwen/Qwen2.5-7B-Instruct	253
beomi/Llama-3-Open-Ko-8B-Instruct-preview	113
deepseek-ai/DeepSeek-R1-Distill-Qwen-1.5B	88
mistralai/Mistral-7B-v0.1	87
meta-llama/Meta-Llama-3-8B	70
microsoft/swin-tiny-patch4-window7-224	53
black-forest-labs/FLUX.1-dev	41
lerobot/smolvl4_base	39
openchat/openchat_3.5	36
openai/whisper-tiny	35

Custom Licenses

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- **DeepSeek**
- **Qwen**
- **Llama**
- **Grok**
- **Gemma**

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Qwen

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- *To generate or disseminate verifiably false information and/or content with the purpose of harming others;*
- *To generate or disseminate inappropriate content subject to applicable regulatory requirements;*
- *To generate or disseminate personal identifiable information without due authorization or for unreasonable use;*
- *To defame, disparage or otherwise harass others;*
- *For fully automated decision making that adversely impacts an individual's legal rights or otherwise creates or modifies a binding, enforceable obligation;*
- *For any use intended to or which has the effect of discriminating against or harming individuals or groups based on online or offline social behavior or known or predicted personal or personality characteristics;*
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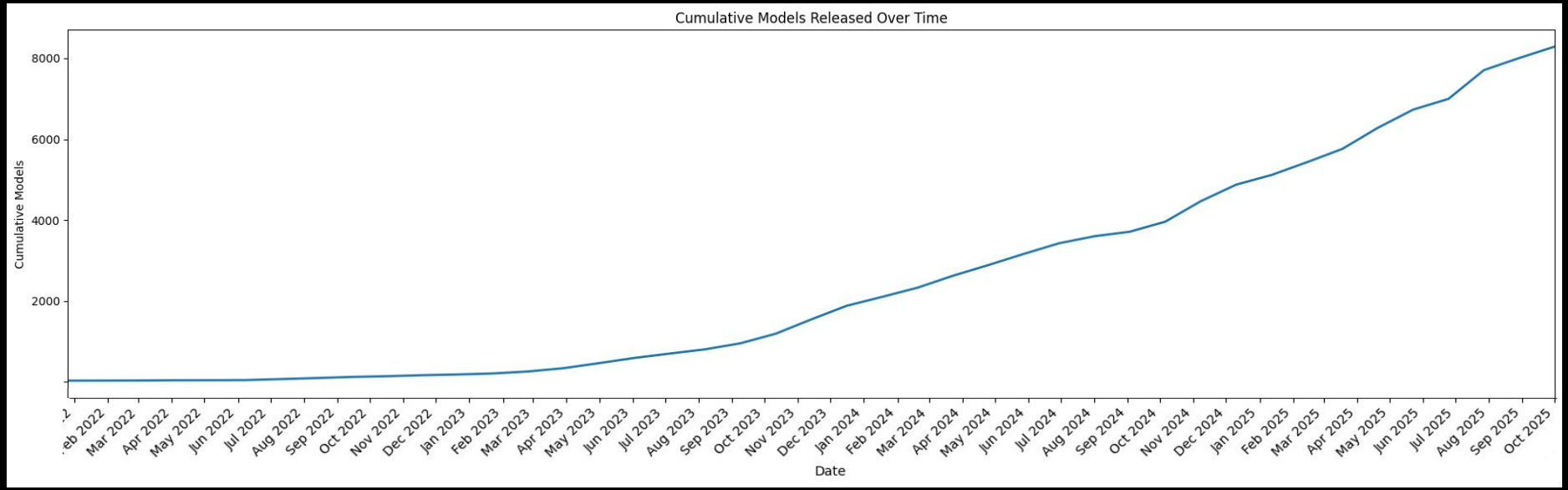
Cumulative Models Released Over Time
Cumulative Models
8000
6000
4000
2000
Date
Feb 2022
Mar 2022
Apr 2022
May 2022
Jun 2022
Jul 2022
Aug 2022
Sep 2022
Oct 2022
Nov 2022
Dec 2022
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  - Models and models
  - Licenses and models

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- **Crowdsourced “open” AI model evaluation**

Thank you

Gabriel Toscano

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Submit an “open” AI model for the study