OPEN SOURCE AI DEFINITION

Online public townhall

Jan 26, 2024

Community agreements

- **One Mic, One Speaker** -- Please allow one person to speak at a time.
- **Take Space, Make Space** -- If you tend to talk more, we invite you to make space for others to share. If you tend not to share, we invite you to speak up.
- **Kindness** -- This work is hard, but we don't have to be. Gentleness and curiosity help. Those who use insults or hate speech will need to leave the meeting.
- **Forward Motion** -- We advance by focusing on what is possible in the moment and doing it. Obstacles are marked for later discussion, not used to stop the process. If we hit a boulder, we note it on the map and keep walking. We'll come back and unearth it later on.
- **Solution-Seeking** -- This work is so complex that focusing on what won't work will stop it. Suggesting new ideas, options, and proposals is vulnerable, but crucial. All of us are needed to make this work.
- **Anything else?**

The objective for 2024

Open Source AI Definition version 1.0

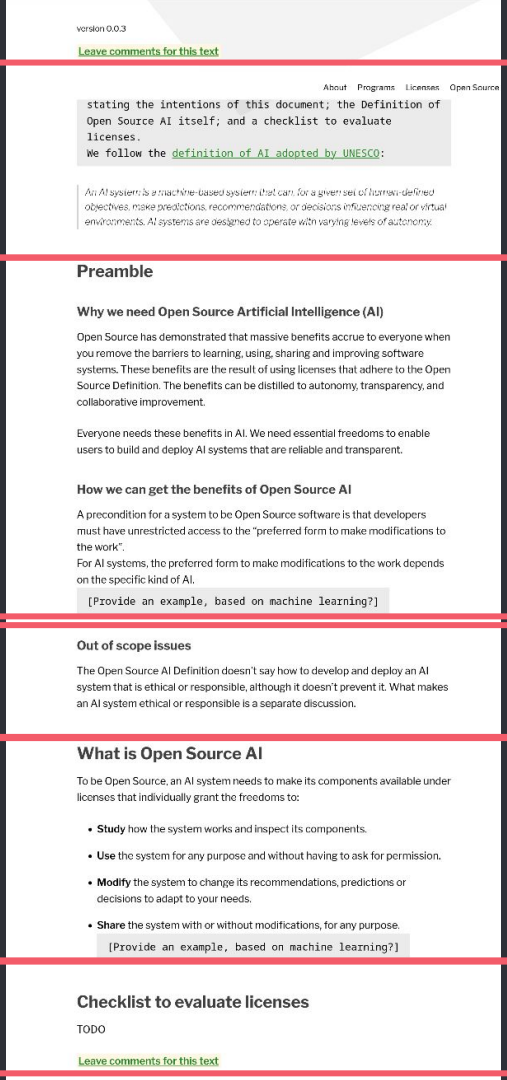
Definition of AI system

Preamble

Out of scope issues

4 freedoms

License checklist



version 0.0.3

Leave comments for this text

About Programs Licenses Open Source

stating the intentions of this document; the Definition of Open Source AI itself; and a checklist to evaluate licenses.
We follow the definition of AI adopted by UNESCO:

> *An AI system is a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. AI systems are designed to operate with varying levels of autonomy.*

Preamble

Why we need Open Source Artificial Intelligence (AI)

Open Source has demonstrated that massive benefits accrue to everyone when you remove the barriers to learning, using, sharing and improving software systems. These benefits are the result of using licenses that adhere to the Open Source Definition. The benefits can be distilled to autonomy, transparency, and collaborative improvement.

Everyone needs these benefits in AI. We need essential freedoms to enable users to build and deploy AI systems that are reliable and transparent.

How we can get the benefits of Open Source AI

A precondition for a system to be Open Source software is that developers must have unrestricted access to the "preferred form to make modifications to the work".
For AI systems, the preferred form to make modifications to the work depends on the specific kind of AI.

[Provide an example, based on machine learning?]

Out of scope issues

The Open Source AI Definition doesn't say how to develop and deploy an AI system that is ethical or responsible, although it doesn't prevent it. What makes an AI system ethical or responsible is a separate discussion.

What is Open Source AI

To be Open Source, an AI system needs to make its components available under licenses that individually grant the freedoms to:

- **Study** how the system works and inspect its components.
- **Use** the system for any purpose and without having to ask for permission.
- **Modify** the system to change its recommendations, predictions or decisions to adapt to your needs.
- **Share** the system with or without modifications, for any purpose.

[Provide an example, based on machine learning?]

Checklist to evaluate licenses

TODO

Leave comments for this text

What is Open Source AI

To be Open Source, an AI system needs to be available under legal terms that grant the freedoms to:

- **Use** the system for any purpose and without having to ask for permission.
- **Study** how the system works and inspect its components.
- **Modify** the system to change its recommendations, predictions or decisions to adapt to your needs.
- **Share** the system with or without modifications, for any purpose.

What is the **preferred form to make modifications** to an AI system?

Getting the specifications

AI systems	List of components	Legal frameworks	Legal documents	**Checklist**
As defined by the OECD.	What elements are necessary to: - use - study - modify - share an AI system?	For each artifact, evaluate which laws apply. Some will be under “Intellectual Property” regimes, some will be under other regimes.	We’ll match the components and the identified legal frameworks with the terms of the legal documents already in use, where available.	After repeating this exercise enough times, we’ll be able to generalize the outcomes and write the specs to evaluate the freedoms granted.

Report from the first working group session
Analyzing Llama2

Participants

- ✔ **Stefano Maffulli** -- Open Source Initiative (convener)
- ✔ **Mer Joyce** -- Do Big Good (facilitator)
- ✔ **Bastien Guerry** -- DINUM, French public administration
- ✔ **Ezequiel Lanza** -- Intel
- ✔ **Roman Shaposhnik** -- Apache Software Foundation
- ✔ **Davide Testuggine** -- Meta
- ✔ **Jonathan Torres** -- Meta
- **Stefano Zacchiroli** -- Polytechnic Institute of Paris

✔ = attended

All members participating in a personal capacity.

Purpose

- **Process** -- OSI has been convening a global conversation to find the definition of open source AI for almost two years.
- **Track** -- The 2024 objective scope for Track 1: System Testing is to discover what components need to be available in each AI system for the whole system to be studied, used, modified, and shared. We plan to complete this track at the latest by May.
- **Working group report** -- objective is to talk through initial points of difference on what components of Llama 2 would need to be open for the whole AI system to be studied, used, modified, and shared.

Framing

- **Document** – We'll review the components table in the Llama 2 specs doc and decide which exist in that AI system, with a focus on resolving disagreement.
- **Expectations** – We'll see how much of the table we get through. (Insights on tempo and pace will be among the learnings from this meeting.)
- **Anything else?** – Are there any other expectations or framings we should put in place before we begin working through the components table?

Go to Llama 2 document →

What do you need to give an input and get an output from LLaMA2? (use)

Code	Which of these components is strictly necessary to **use** Llama2?
Data preprocessing code	Not necessary BG EL Nice for scientific reproducibility DT SM JT
Training code	Not necessary BG , EL, JT
Code used to perform inference for benchmark tests	Not necessary BG , DT, EL, SM, JT
Inference code	Necessary SM, EL, DT BG
Evaluation code	
Any libraries or other code artifacts that are part of the system, such as tokenizers and hyperparameter search code, if used.	Necessary BG,EL SM Should be split by “do you need it to run the model?”, so a tokenizer is necessary while hyperparameter search code is not (you do hyperparameter search at training time)

What do you need to give an input and get an output from LLaMA2? (use)

Data - All data sets, including:	
Training data sets	Not necessary - JT ,EL Not necessary BG
Testing data sets	Necessary to check performance claims & compare models, not necessary to run the model DT Nice to have (for validation) - JT Not necessary BG ,EL
Validation data sets	Nice to have (for validation) - JT DT SM Not necessary BG
Benchmarking data sets	Nice to have (for validation)- JT ,EL Not necessary BG
Data cards	Nice to have - JT Not necessary BG
Evaluation metrics and results	Nice to have - JT Not necessary BG
All other data documentation	Nice to have - Jt Not necessary BG

What do you need to give an input and get an output from LLaMA2? (use)

Model [description TK]	
Model architecture	Not necessary EL Not necessary BG
Model parameters	Not necessary EL Necessary SM
Model card	Necessary EL
Sample model outputs	Nice to have EL SM
Other documentation [or ….] produced, including	
Thorough research papers	Nice to have EL SM
Usage documentation	Necessary EL SM

Next questions

What do you need to understand how LLaMA2 was built, how can it be fine-tuned, what biases, get a sense of why an output to an input … ? (study)

- how was it built, explain its performance, etc.

What do you need to give an input and get a different output from LLaMA2? (modify)

- Techniques and tools to adapt/modify for use including fine-tune and optimize.

What do you need to let others give an input and get an output from LLaMA2? (share)

- Either as-received or after fine-tuning and other modifications.

Next steps

Recruiting volunteers

- Review and validate the list of components
- Analyze other AI systems
  (Pythia, BLOOM, Mistral, OpenCV ...)

2024 timeline

System testing work stream

Stakeholder consultation work stream

Release schedule

February	March	April	May	June …	… October
Call For Volunteers + Activity Feedback and Revision	**Virtual System Review Meetings Begin**	**Virtual System Review Meetings Continue**	**Virtual System Review Meetings END**	**Feedback Informs Content of OSI In-Person Stakeholder Meeting**	**Monthly Virtual Meetings**
Bi-Weekly Virtual Public Townhalls	Bi-Weekly Virtual Public Townhalls	Bi-Weekly Virtual Public Townhalls	Bi-Weekly Virtual Public Townhalls	Townhall + **OSI In-Person Stakeholder Meeting** (date + place TBD)	**Release version 1.0**
Draft 0.0.5	Draft 0.0.6	Draft 0.0.7	Draft 0.0.8	RC1	v. 1.0

Criteria for RC1 and v. 1.0

RC1

- Expected outcome of in-person meeting end May/early June!
- The draft is completed in all its parts
- The draft is supported by at least 2 representatives for each of the 6 stakeholder groups

version 1

- Expected outcome of in-person and online meetings through the summer/early autumn
- The draft is endorsed by at least 5 reps for each of the stakeholder groups
- Announced in late October

Help us find stakeholders

System Creator	License Creator	Regulator	Licensee	End User	Subject
Makes AI system and/or component that will be studied, used, modified, or shared through an open source license (e.g., ML researcher in academia or industry)	Writes or edits the open source license to be applied to the AI system or component; includes compliance (e.g., IP lawyer)	Writes or edits rules governing licenses and systems (e.g. government policy-maker)	Seeks to study, use modify, or share an open source AI system (e.g. AI engineer, health researcher, education researcher)	Consumes a system output, but does not seek to study, use, modify, or share the system (e.g., student using a chatbot to write a report, artist creating an image)	Affected upstream or downstream by a system output without interacting with it intentionally; includes advocates for this group (e.g. people with loan denied, or content creators)
✅	✅	⚠️	✅	⚠️	⚠️
Enough to start	Enough to start	Leads to US, EU, Singapore, no commitment yet	Enough to start	Which org is squarely in this space?	ACLU, Algorithmic Justice League

It doesn’t end with v. 1.0

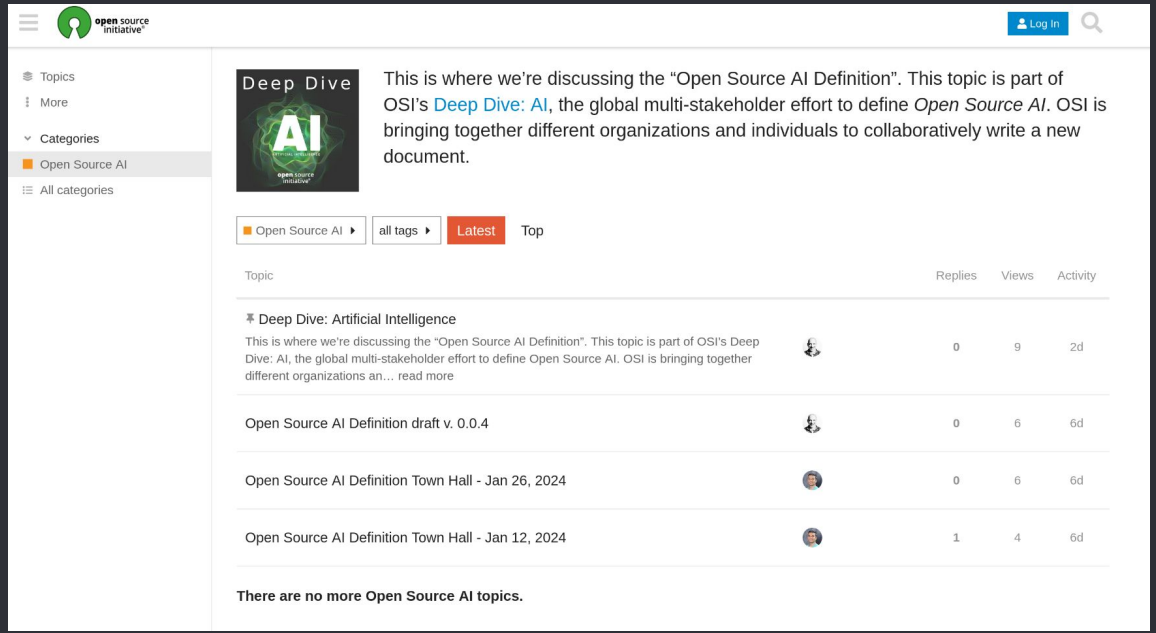
We’ll need to define rules for maintenance and review of the Definition

OSI's immediate next steps

- more publicity to the process
  - ~~public discussion forum~~ - https://discuss.opensource.org
  - bi-weekly townhalls
  - more opportunities to volunteer
- update project landing page
- reach out to more stakeholders
- raise funds for 2024 meetings
- setup the board for review and approval of v. 1.0

Join the conversation

- Public forum
- Join as OSI member
  - Free or full
  - SSO with other OSI websites



Draft v. 0.0.4 of the Open Source AI Definition

Open to public comments

https://opensource.org/deepdive/drafts