

Allowed Models and Tools for Open-Ended Problems

Version: March 30, 2026

The following rules apply **only to open-ended problems**.

For **non-open-ended problems**, participants must follow the specific instructions given in each problem statement. Unless a problem explicitly states otherwise, the models and tools listed below are **not allowed** for non-open-ended problems.

For open-ended problems, participants may use the following approved libraries and tools.

1. Classical machine learning libraries

Participants may use **anything** provided by the following libraries:

- scikit-learn
- XGBoost
- LightGBM
- CatBoost
- UMAP

This includes, but is not limited to, models, preprocessing tools, feature-selection tools, dimensionality-reduction tools, clustering methods, evaluation utilities, pipelines, and other official components provided by these libraries.

2. PyTorch and TorchVision

Participants may use **anything** provided by:

- PyTorch
- TorchVision

This includes, but is not limited to:

- modules under torch.nn
- optimizers
- loss functions
- datasets
- dataloaders

- tensor operations
- training utilities
- transforms
- pretrained and non-pretrained models in torchvision.models
- other official components provided by PyTorch and TorchVision

3. Approved Hugging Face checkpoint models

Hugging Face is the **only restricted exception**. Participants may **not** use arbitrary Hugging Face resources. Instead, they may use **only** the following approved checkpoint models, and these models must be imported from the transformers library.

NLP transformer models

- bert-base-uncased
- roberta-base
- distilbert-base-uncased
- albert-base-v2
- microsoft/deberta-base
- gpt2
- microsoft/Phi-3-mini-4k-instruct
- t5-small
- t5-base
- google/mt5-base
- facebook/bart-base

Vision transformer models

- google/vit-base-patch16-224
- facebook/deit-base-patch16-224
- microsoft/beit-base-patch16-224
- microsoft/swin-tiny-patch4-window7-224

CLIP models

- openai/clip-vit-base-patch16
- openai/clip-vit-base-patch32
- openai/clip-vit-large-patch14
- openai/clip-vit-large-patch14-336

If the transformers package is not already installed in the coding environment, participants may install it using:

pip install transformers

Important Notes

- These rules apply **only to open-ended problems**. For non-open-ended problems, participants must read the individual problem instructions carefully.
- Participants are **not required** to solve an open-ended problem by directly using one of the approved models above. A participant may instead develop their own model, or combine self-developed components with approved imported components.
- In particular, participants should **not** interpret the approved list as a requirement to simply try the listed models one by one. The purpose of the list is only to define the boundary of allowed external model resources.
- Some approved models may have both **pretrained** and **non-pretrained** versions. If a participant chooses to use such a model, the participant must independently decide whether to use a pretrained version or a non-pretrained version, subject to the competition rules.
- The only special restriction in this section is **Hugging Face**: participants may use only the explicitly approved Hugging Face checkpoints listed above, and may not use other Hugging Face models, checkpoints, or resources.
- Some open-ended problems may include additional restrictions, such as prohibiting all of the above models or allowing contestants to use only one or a subset of them. Please read the instructions for each problem very carefully.