

Contest Rules for IOAI 2025

Version 2.4 (August 3, 2025)

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This document outlines the official rules for three contests of the **International Olympiad in Artificial Intelligence (IOAI) 2025**:

- Individual Contest
- Team Challenge
- GAITE Contest

The rules may be updated to address omissions, inconsistencies, or new information prior to the event, but they will not change substantially in format.

Team Leaders are responsible for ensuring that all team members fully understand and comply with these rules.

1. General Requirements

1.1. Code of Conduct

OATH. We, the participants of this International AI Olympiad, solemnly swear to compete responsibly and honestly, embracing the spirit of fair play and collaborating ethically with AI. For the glory of humankind and the honor of our teams, we swear!

Respect. All individuals involved are expected to show respect and consideration; to create a welcoming environment that celebrates diversity and fosters mutual understanding.

Integrity. Participants must engage in fair play, avoid deception, and maintain the spirit of honest contest.

Confidentiality. Sensitive information, especially regarding problem sets and solutions, must be safeguarded to ensure the integrity of the contest.

Professionalism. Interactions should be characterized by formality and decorum, reflecting the serious nature of the academic pursuit and respect for fellow competitors and officials.

Safety and Welfare. The IOAI is committed to providing a secure environment. Any behavior that endangers the emotional or physical well-being of participants is strictly prohibited.

Compliance with Rules. Understanding and adhering to the official rules are obligatory. This includes guidelines for the contest structure, submission deadlines, and conduct during events.

Reporting Misconduct. Transparency is crucial. Any unethical behavior or rule violations observed should be promptly reported to ensure fairness and accountability.

Enforcement. The IOAI will enforce this code rigorously. Infractions can lead to sanctions, including but not limited to disqualification and barring from future participation.

1.2. Eligibility Criteria

1. All contestants must be less than 20 years old on the Individual Contest Day 1, which means their birthday must be after August 5, 2005.
2. All contestants must be high school students living in the country that they are representing at the time of the contest.

2. Individual Contest

During the Individual Contest, the contestants from each country use laptops provided by the organizers, must not communicate during the contest, and their results will be computed individually. **It is important to know that medal allocations are only based on results of the Individual Contest.** The tasks of the Individual Contest are designed in accordance with the [IOAI Syllabus](#).

2.1. Contest Schedule

- **At-home contest:** There are 3 problems provided to each team about one month before IOAI 2025. These problems are for educational purposes, and the results of the at-home contest **do not** affect the final results of IOAI 2025.
- **Practice session:** A 1.5 hour practice session will be held before Individual Contest 1 to help contestants familiarize themselves with the contest hall and the contest system. This has no impact on the scores and medals.
- **Individual Contest 1:** There are 3 tasks in this contest which are an extension and continuation of the at-home contest tasks. Contestants will have six hours to solve these problems.
- **Individual Contest 2:** There are 2 or 3 tasks in this contest which are novel and different from the at-home tasks. Contestants have six hours to solve these problems.

2.2. Contest Environment

- All contestants will have access to identical local machines during the contest, though minor technical differences may exist.
- Contest tasks may include, but are not limited to: writing code, fitting models on training data, running inference with trained models on test data.
- All contestants will have access to identical GPU resources during the contest, with a minimum RAM of 24 GB.
- The Bohrium (ioai.bohrium.com) platform will be used to access the task statements and datasets, submit solutions, and see the scores.

- A web-based Jupyter notebook environment will be made available within Bohrium - this is how GPUs will be accessible.
- Additional common editors will be installed locally: VSCode, PyCharm.
- The contestants will have access to GPT-4o-mini with at most 4000 tokens per query, as integrated within Bohrium. The use of any other LLM-based chatbot, copilot, or AI code assistant tools is prohibited. The use of any API (including LLM APIs) is prohibited, unless specified in the task.
- Access to the internet will be restricted to the following list of websites (contestants must not log in to these websites, post questions, or use them to communicate with anyone outside the contest hall):
 - scikit-learn.org
 - pytorch.org
 - huggingface.co (or a mirror of huggingface in China)
 - numpy.org
 - python.org
 - pypi.org
 - A translation website
- The following python libraries will be available during the contest. Additional libraries are installed on the system, including the dependencies of these packages. The list below highlights the libraries that contestants are most likely to import directly in their solutions:
 - **Core AI/ML:** torch, scikit-learn, xgboost, catboost, transformers, spacy, nltk, gensim, fasttext, LightGBM
 - **Data Handling:** pandas, numpy, scipy, csv, json, pickle, zipfile
 - **Vision:** opencv-python, Pillow, torchvision, scikit-image
 - **Visualization:** matplotlib, seaborn, plotly, autoviz
 - **Utilities:** joblib, datasets, evaluate, os, sys, re, itertools, collections, time, pdb, pytorch-lightning, tensorboard, tqdm
 - TensorFlow and Keras are NOT available during the contest.
- On a per-task basis, contestants may be asked to submit their code, trained models, and/or model predictions. There will be no additional time for model training after the end of the contest.
- During the contest, the machines of the contestants and the grading system are not connected to the Internet. This means that the contestants cannot download any pretrained models from the Internet, or use any external AI API. However, there are some pretrained models in some packages that are available during the contest (e.g. pretrained ResNet models in torchvision). The contestants can use these pretrained models.
- Please use [this form](#) to submit requests for:
 - Additional editors to be installed on the contestants' machines
 - Additional websites to be added to the white list
 - An online platform for translation from English to the team's language(s) translation

Form submissions will be accepted until June 30, 2025.

- The final list of available websites, editors, tools, search engine and translation system will be published before the event.
- During the contest, screen activity on all contestant laptops will be monitored in real time and recorded for future reference.

2.3. Translation

- To provide translated tasks to the contestants, a translation session will start three hours before each Individual/GAITE Contest.
- During the translation session, TLs will receive a laptop provided by the host, the tasks in English and access to a translation website (and no other Internet access).
- For languages not supported by the translation website, a precomputed GPT-4 translation will be provided in editable form.
- In exceptional situations where the host-provided laptops do not support a specific language, TLs can ask to use their own laptop to edit a GPT-4 translation of the tasks.
- If several teams have contestants who speak the same language, the TLs of those countries may collaborate during the translation session. In such a situation, the TLs must discuss without distracting other TLs.
- All translations should match the original English version. Providing extra information or hints in translations is prohibited.
- During each contest, all students will have access to the original English version of the tasks (digitally) as well as all translations (on paper).
- All translations will be shared with the TLs as soon as the contest starts, and made public after the contest on IOAI official website. If any violation of the above rules (e.g. providing hints or extra information) is reported after the contest, the team who violated the rules will face penalties.

2.4. Quarantine Rules

- From the start of the translation session until the end of each contest, all task-related material shared with the TLs is considered highly confidential.
- There is no quarantine for the contestants before the contest. This means that they can use their electronic devices before the contest.
- TLs must sign a Non-Disclosure Agreement, promising not to communicate details of the tasks with anybody outside the translation session until the end of the contest.
- From the start of the translation session until the end of translation session, all TLs who are present in the translation session are under quarantine. During this period, TLs present in the translation session cannot use cell phones, laptops, or other communication devices (unless they have been granted permission to use their laptop—disconnected from the Internet—in the case where host-provided laptops do not support their language).
- After quarantine is finished the TLs can use their cell phones and laptops, but they are NOT allowed to share anything related to the tasks with other people or post them online until the contest is finished. During this period, any communication between TLs and

others (e.g., contestants or anybody else) regarding the contest tasks may result in disqualification of the team.

2.5. Scoring

- Each task may consist of multiple subtasks, with each subtask contributing a portion of the total score.
- **Maximum Score:** The maximum score for each task is 100 points.
- **Final Score Calculation:** The final score for a task is the sum of the scores of its subtasks, rounded to two decimal places.
- **Baseline Solution:** A baseline solution, typically provided in the task statement, represents a simple or trivial solution that helps establish the minimum acceptable performance for the task.
- **Normalized Score Calculation:** For each task, the score of a submission is normalized using the following formula:

$$\text{Norm_Score} = (\text{Submission_Score} - \text{Min_Score}) / (\text{Max_Score} - \text{Min_Score}) * 100$$

- **Submission_Score** = The raw score obtained for the submission (e.g., accuracy, AUC, F1-score, or any other metric specified in the task statement). The scoring section of the task statement describes only the submission score.
- **Min_Score** = The score of the baseline solution.
- **Max_Score** = The maximum score, determined by the greater of the following two values:
 - **0.9 × SC_Solution:** The score of an (almost) optimal solution written by the Scientific Committee, or
 - **Max_Submission:** The highest unnormalized score achieved by any contestant's submission during the contest.
- **Example:** Assume a task is evaluated based on **accuracy**, and the raw accuracy score of a contestant's submission is 85%. The baseline solution has an accuracy score of 60%, and the optimal solution from the Scientific Committee has an accuracy score of 95%.
 - **Submission_Score** = 85%
 - **Min_Score** = 60%
 - **SC_Solution** = 95%
 - **Max_Submission** = 90% (let's assume another contestant achieved 90%)
 - **Max_Score** = $\max(0.9 \times 95\%, 90\%) = 90\%$
 - **Norm_Score** = $(85\% - 60\%) / (90\% - 60\%) \times 100 = (25\%) / (30\%) \times 100 = 83.33$
 - Thus, the normalized score for this submission would be **83.33**.

2.6. Feedback (Scoreboard)

- During the contest, contestants will receive provisional feedback for each submission, showing the score per subtask and indicating the result for each test case.

- During the contest, each contestant will have access only to their own scores in Leaderboard A (based on validation dataset) on each task. They cannot see the scores or rankings of the other contestants. But they can see the Min_Score (score of the baseline solution) and the Max_Submission (the highest unnormalized score achieved by any other contestant at each time of the contest).
- Leaderboard A (based on validation dataset) is live and publicly available during the contest for the people outside of the contest hall. Contestants do not have access to it during the contest.
- After the contest, each TL receives the scores of their contestants on the test dataset, both as a raw score, and as a normalized score. This information is distributed on paper. It is recommended that the scores of each team is kept confidential from the other teams until the closing ceremony.

2.7. Supplies

- **Provided Supplies:** Blank paper, writing tools, Clarification Request Forms, snacks, and water will be provided in the contest hall.
- **Approved Items:** Writing utensils, small mascots, non-electronic earplugs, ID badges, snacks, and water are allowed. Contestants may ask the Scientific Committee to bring their own keyboard or mouse to the contest hall. This request should be made during the practice session. Bringing an external monitor is not allowed.
- **Prohibited Items:** Contestants may **not** bring items such as electronic devices (computers, phones, earphones, calculators, any sort of communication or Bluetooth-enabled items), books, manuals, data storage media, or any items that could store or transmit data.
- Medical items (e.g. tablets, glucometers) are allowed but must be approved by the Scientific Committee before being brought into the contest hall. These and other special need requests can be made during the practice session. If any medical device requires a Bluetooth connection to software on a cell phone, the cell phone should be kept by a volunteer in the contest hall who is previously educated on what to do in case of any abnormal situation. If there are any other situations, the Scientific Committee should be informed before the practice session.

2.8. Starting the Contest

- Contestants must be seated **at least 5 minutes** before the start of the contest.
- Contestants should not touch the workstation or any tools until instructed by the organizers.

2.9. Clarification Requests

- Clarifications regarding task details, rules, or grading may be submitted to the Scientific Committee via the contest system or written forms.

- The Scientific Committee will respond to clarification requests with one of the following answers:
 - Yes / No
 - Please refer to Section [section_number] of the Task Statement
 - Please refer to Bohrium Guide or Appendix Platform Mechanism or Contest Rules
 - Please refer to the dataset and the baseline first when the task description is unclear
 - The Python environment cannot be changed during the Contest
 - Please ask your question in Yes/No format
- The Scientific Committee may deny responding to a question that is ambiguous, unclear or pertaining to knowledge the contestant should have.
- Any non-trivial and substantial answers will be broadcasted to all contestants.

2.10. Technical Assistance Requests

- If a contestant faces any technical issues (e.g., computer, network problems), they should raise a colored card to request assistance.
- Assistance staff will address such issues but will not answer questions regarding contest tasks.

2.11. Ending the Contest

- Contestants will receive **three warnings** at 15, 5, and 1 minute before the end of the contest.
- At the end of the contest, all contestants must **immediately stop working** and await instructions to leave their desks.
- In case of a substantial technical problem, contestants may be given extra time, on a case-by-case basis.
- If a contestant encounters an issue that may require extra time (such as a network disconnection or a frozen computer), they must immediately notify the Scientific Committee by submitting a clarification request asking for extra time. The contestant will be informed before the end of the contest whether extra time has been granted. If approved, the contestant must resume working immediately after the contest ends, as the extra time will begin at that point.

2.12. Cheating and Violations

- Contestants are prohibited from engaging in any form of cheating, including but not limited to: tampering with the contest system, trying to breach scoring system, communicating with team leaders or deputy leaders during the quarantine period, direct or indirect communication with other contestants or people outside the contest hall during the contest, bringing prohibited items into the contest hall, or attempting unauthorized access to test data.

- The screen of each contestant's computer may be recorded or remotely proctored.
- Assistance staff will log any suspected cheating or rule violations observed during the contest, including discussions they had with or warnings given to contestants. This information will be reviewed by the Scientific Committee.
- Violating any of these rules may result in **disqualification or other penalties**.

2.13. Appeal Process

- If a contestant or team believes that their results in the Individual Contest, GAITE Contest, or Team Challenge should be revised, an appeal can be raised.
- All appeals **MUST** be submitted by the Team Leader.
- For the Individual & GAITE Contests, appeals can be submitted starting immediately after the contest ends. The final time to submit any appeals (for Day 1 and Day 2) will be August 7, 11:00 AM (Beijing time).
- For the Team Challenge, appeals can be submitted starting at the beginning of the challenge round, and must be submitted within 1 hour after the round ends.
- To submit an appeal, please visit: <https://ioai-official.org/appeals>
- All appeals will be reviewed by the International Jury of the ISC.
- If the Jury has any questions or needs extra information about the appeal, they will contact the Team Leader. The Team Leader must respond to the Jury as quickly as possible. If there was extra information required, the Jury might decide to have a face-to-face meeting with the Team Leader and possibly the affected contestant.
- Final decisions on appeals will be shared with the General Assembly (GA) during the first GA meeting held after the decisions have been made.
- The **final score for any task may change** due to an accepted appeal. Appeals may result in a higher or lower score. Repeated appeals for the same issue will not be accepted.

3. Team Challenge

- Team Challenge is an official part of IOAI in which teams, rather than individual contestants, participate in a creative and AI-oriented challenge.
- The style of the Team Challenge changes every year. During the IOAI 2024 Team Challenge (formerly known as "Practical Round"), teams were asked to use existing AI tools and platforms for an exciting task: designing the album cover and music video for the next hit song of a Bulgarian pop star. The style of the Team Challenge for IOAI 2025 will be announced later.
- During the Team Challenge, all contestants of each team will be seated together and can communicate and cooperate.
- The number of computers that a team can use during the Team Challenge and the websites and tools allowed to be used are task-specific and will be announced before the Team Challenge.

- The tasks of the Team Challenge are provided in English, and there is no translation session for the Team Challenge. The contestants can use the same web-based translation system of the Individual Contest during the Team Challenge.
- During the Team Challenge, the contestants of each team cannot communicate with people outside the contest hall.
- Approved and Prohibited items in the Team Challenge are similar to those of the Individual Contest and GAITE.
- The scoring for the Team Challenge is task-specific and will be announced in the task statements.
- The teams who achieve the topmost results of the Team Challenge will receive Team Challenge awards during the closing ceremony of IOAI.
- The duration of the Team Challenge depends on the style of running it and might take a few hours to a full day.

4. GAITE Contest

- Global AI Talent Empowerment (GAITE) Contest is a special simplified version of the Individual Contest. To participate, teams must pre-register in GAITE (<https://ioai-official.org/gaite>).
- The GAITE Contest is very similar to the Individual Contest (described in section 2 above) and consists of two days, 6 hours each, which run concurrently with Individual Contests 1 and 2.
- The tasks of GAITE Contest Day 1 are similar to the tasks of Individual Contest 1. The main difference is that GAITE contestants might ask for hints. The details of scoring, given hints, will be provided before the contest.
- The tasks of GAITE Contest Day 2 are simpler than the tasks of Individual Contest 2. Furthermore, the GAITE contestants might ask for hints.
- There is a separate scoreboard for the GAITE Contest.
- The contestants who achieve the top results of the GAITE Contest will receive awards (**but not medals**) during the closing ceremony.

5. Medals, Awards, Trophies and Certificates

5.1 Individual Contest

- Medals are awarded solely based on total scores from the Individual Contest. The number of contestants refers to those who participate in at least one day of the Individual Contest. All scores reflect the total from the Individual Contest.
- The minimum score required for a **Gold Medal** is the highest score that ensures at least one-twelfth of all contestants receive a gold medal.
- The minimum score required for a **Silver Medal** is the highest score that ensures at least one-quarter of all contestants receive either a gold or silver medal.

- The minimum score required for a **Bronze Medal** is the highest score that ensures at least one-half of all contestants receive a gold, silver, or bronze medal.
- A contestant who does not earn a medal will be granted an **Honourable Mention** if, on at least one of the two days of the Individual Contest, fewer than half of the contestants achieve a higher score than they do.
- The top three contestants with the highest total scores in the Individual Contest will be awarded the **First Place, Second Place, and Third Place Trophies**.

5.2 Team Challenge Trophies

- All teams participating either in the Individual Contest or the GAITE Contest participate in the Team Challenge.
- Three teams with the highest scores in the Team Challenge will receive the **Team Challenge First Place, Second Place, and Third Place Trophies**.

5.3 GAITE Contest Awards

- Awards in the GAITE Contest follow the same **cutoff logic** as the Individual Contest medals. However, they are based on the number of contestants who participate in at least one day of the GAITE Contest.
- Instead of medals, the top GAITE contestants receive GAITE Level One/Two/Three Awards:
 - **GAITE Level One Award:** Given to scores within the top one-twelfth of GAITE contestants.
 - **GAITE Level Two Award:** Given to scores within the top one-quarter of GAITE contestants, including Level One recipients.
 - **GAITE Level Three Award:** Given to scores within the top one-half of GAITE contestants, including Level One and Two recipients.
 - A contestant who does not receive an award will be granted a **GAITE Honourable Mention** if, on at least one of the two days of the GAITE Contest, fewer than half of the contestants score higher than they do.

5.4 Certificates

5.4.1 Participation Certificate

- These certificates are awarded to all individuals officially involved in IOAI, including (but not limited to) contestants, team leaders, guests, volunteers, board and ISC members, members of the host scientific, technical, and organizing committees, and sponsors.
- Each certificate will include the participant's name, role (e.g., Team Leader), and country. It will be signed by the Chair of the Board and the Chair of the Host Organizing Committee. Additional signatures may be included at the discretion of the host country and with the approval of the Board.

5.4.2 Achievement Certificate

- These certificates are awarded to all contestants or teams who win any official medals, awards, or trophies.
- Each certificate must include the name of the contestant or team, their country and team name, and the precise type of achievement (e.g. Medals, Awards, Trophies, Honourable Mentions).
- Achievement Certificates will be signed by the Chair of the Board, the Chair of the ISC, and the Chair of the Host Scientific Committee.

5.5 Hall of Fame

- All results, including the scoreboard, medals, and awards, will be recorded and published on the official IOAI website.

If you have any suggestions or questions about the contest rules, please contact the IOAI International Scientific Committee (ISC) by sending an email to isc@ioai-official.org.