From Algorithms to Neurons

Contest Rules

August 20–24, 2026 · Constanta, Romania

While every effort has been made to ensure completeness and clarity, these regulations may be subject to updates prior to the event to address any identified omissions, resolve inconsistencies, or incorporate relevant new information that may affect fair participation.

I. General Presentation

From Algorithms to Neurons brings together middle school, high school, and undergraduate students with an interest in signal processing and artificial intelligence, through workshops, an AI Competition, a Hackathon, and a Scientific Paper / Showcase section.

The event pursues the following objectives:

- Developing skills specific to scientific and technical creativity in the field of artificial intelligence among motivated students.
- Encouraging students to apply creative, critical, and analytical thinking to real problems in AI and signal processing.
- Identifying high potential students and directing them toward further study and careers in AI and engineering.
- Providing mentors and educators with a framework for guiding students through applied, hands-on AI projects.

The General Commission reserves the right to amend the present regulation. Any such amendment must be approved by a majority vote of the General Commission before it takes effect, and participants will be informed of any changes in a timely manner.

II. Participation

The event is open to students in Group A (Grades 7–10) and Group B (Grades 11–12 and undergraduate students), across all school types and forms of education, in line with the principles of equal opportunity and non discrimination.

Each participant has the right to take part in the event free of charge, subject to the review of the CV submitted at registration. Admission to the AI Competition, the Hackathon, and the Scientific Paper / Showcase is granted based on the information and qualifications presented in this CV.

Participants who register for a team-based track (Hackathon or Scientific Paper / Showcase) may form teams of up to three members. Team members may come from different schools; where team members belong to different age groups, the team will be registered in the higher group.

Prior to the event, each participant must submit the completed GDPR consent form corresponding to their status — the adult participant form, or, for participants under 18, the parent/legal guardian form — together with the signed Participation and Rules Compliance Agreement. Both documents are a condition of admission to the event.

III. Organizing Bodies

General Commission

Holds overall authority over the event's regulation and its amendment, acting by majority vote on any proposed change.

Scientific AI Commission

Designs the tasks for the AI Competition, separately for Group A and Group B, establishes the criteria and structure for prize distribution across the competition, and rules on appeals submitted during the AI Competition.

Organizing Committee

Responsible for the logistics of the event: scheduling, workshops, hackathon supervision, equipment allocation, and the opening and closing ceremonies.

Jury / Evaluation Commission

Evaluates submissions to the Hackathon and to the Scientific Paper / Showcase section. Each member of the Jury must declare, in writing, that they are not the mentor, relative, or affiliate of any participant in a project they are evaluating, and must recuse themselves from evaluating any such project.

IV. AI Competition

The AI Competition is organized separately for Group A and Group B. Each group is assigned its own set of tasks, appropriate to its respective level of knowledge and experience, and each group's session lasts three hours.

The tasks for both groups, as well as the criteria and structure for prize distribution, are established by the Scientific AI Commission. The prizes for the AI Competition will be announced during the opening commission, at the start of the event.

Format and Submission

Tasks are solved individually, on the official competition judging platform, and are evaluated automatically according to the metric prescribed for each task. Each participant may submit a limited number of solutions per task, with a minimum interval of time between two consecutive submissions; both limits are announced by the Scientific AI Commission together with the tasks.

Where a task allows multiple submissions, the participant designates one submission per task as final before the end of the session. If no submission is designated, the highest-scoring submission received for that task is used automatically.

Live and Final Scoring

During the session, participants can see a provisional score on a public leaderboard, calculated using only a portion of the available evaluation data (the validation subset), so as to prevent overfitting to the visible data.

The final score is calculated after the session ends, using the complete evaluation data set (including data not shown during the session), and may therefore differ from the provisional score. Final results are published on the private leaderboard after the session for both groups has concluded.

Tie Breaking Criteria

In case of equal final scores, ranking is determined by comparing, for each competitor, the list of their per-task scores sorted in decreasing order, and comparing these lists lexicographically (i.e., the higher first score wins; if equal, the higher second score wins, and so on). If a tie still cannot be resolved, the Scientific AI Commission may organize a short tie break task.

Appeals

A participant who disagrees with the automatic evaluation of a specific task may submit an appeal through the platform or to the Scientific AI Commission, within the time window announced at the start of the session, specifying the task concerned and the reason for the appeal. Following review, the score for that task may be adjusted upward or downward; the resulting score is final.

Conduct During the Session

Participants may not communicate with one another or with anyone outside the competition room during the session, and may not use unauthorized materials or devices (mobile phones, smartwatches, tablets, external storage media, notes, or any other source of outside information). Only a valid ID document and standard writing instruments are permitted at each workstation, unless the Scientific AI Commission announces otherwise for a specific task.

Internet access on competition workstations, where applicable, is restricted to the official judging platform and to any documentation explicitly authorized for the task. Proctors appointed by the Organizing Committee supervise each competition room and may remove from the room, or disqualify, any participant found in breach of these provisions.

V. Hackathon

The Hackathon runs for 24 consecutive hours, from the opening ceremony and theme reveal to the final submission deadline, followed by judging and the closing ceremony.

Theme and Preparation

The hackathon theme will be revealed immediately before the hackathon begins.

To help participants prepare, dedicated workshops will be held in advance, covering both the technical components and approaches relevant to the eventual theme. Attendance at these workshops is strongly recommended.

Any participant who does not attend the workshops acknowledges and accepts that they will not be provided with hackathon equipment.

Indicative Schedule

The Organizing Committee will publish the exact timetable before the event; the following is an indicative structure of the 24 hours:

Time	Activity
Hour 0	Start and reveal of the hackathon theme; teams check in at their workstations.
Hour 0–1	Kickoff briefing; teams finalize their approach and begin work.
Hour 1–22	Development period. Mentors are available on a rotating schedule for technical guidance.
Hour 12	Optional midpoint check-in: teams may present their progress informally to a mentor for feedback.
Hour 22	One-hour warning is announced; no new features may be started after this point.
Hour 23	Code freeze: the submitted repository and materials may no longer be modified.
Hour 24	Final submission deadline.
Hour 24–26	Judging: live demonstrations and Q&A with the Jury for each team.
Hour 26+	Closing ceremony and prize announcement.

Rules of Conduct

1. All work submitted must be started after the official theme reveal. Projects, codebases, or designs prepared before the hackathon begins are not eligible, although participants may use general-purpose open-source libraries, frameworks, models, and hardware components introduced in the preparatory workshops.
2. Teams may use publicly available APIs, datasets, and pre-trained models, provided these are clearly documented and credited in the final submission.
3. Only registered team members may write code, design, or otherwise substantively contribute to the submitted project; mentors and organizers may offer guidance and technical support but may not complete the work on a team's behalf.
4. At least one member of each team should remain reachable at their workstation or the designated rest area throughout the 24 hours, in case of a mentor check-in, safety announcement, or technical issue.

5. Rest areas will be made available for participants who wish to sleep or take breaks; use of these areas does not exempt a team from the submission deadline.
6. The general provisions of Section VII (Ethics and Integrity) apply throughout the Hackathon, including at the demonstration/judging stage.
7. Any participant who destroys or damages equipment or materials provided by the Organizer will cover the cost of the damage at three times (3x) its real/replacement value, as further detailed in the signed Participation and Rules Compliance Agreement.

Submission Requirements

Before the code-freeze deadline (Hour 23), each team must submit a link to a code repository containing the complete, working source code of the project together with a short written description (README) of the idea, the technologies used, and each member's contribution, as well as a short live or recorded demonstration of the working solution (maximum 5 minutes).

Submissions received after the final deadline (Hour 24) are not eligible for judging, except for a short grace period, if any, announced by the Organizing Committee before the start of the Hackathon.

Evaluation Criteria

Each member of the Jury awards a maximum of 100 points per project, distributed as follows:

Criterion	Max. Points
Technical complexity and quality of execution	25
Innovation and creativity of the solution	20
Relevance to the announced theme	15
Functionality and completeness of the working demo	20
Clarity of the presentation and quality of the pitch	20
Total	**100**

Technical complexity and quality of execution (25 points)

Assesses the technical difficulty of what the team attempted, the soundness of the implementation, and the extent to which the solution goes beyond a superficial or purely cosmetic prototype.

Innovation and creativity of the solution (20 points)

Assesses the originality of the approach and the extent to which the team's idea differs from an obvious or previously seen solution to the same theme.

Relevance to the announced theme (15 points)

Assesses how directly and thoughtfully the project addresses the theme revealed at the start of the Hackathon.

Functionality and completeness of the working demo (20 points)

Assesses whether the solution actually runs and performs the functions claimed, as shown live or in the recorded demonstration, rather than existing only as a concept or partial mockup.

Clarity of the presentation and quality of the pitch (20 points)

Assesses how clearly the team explains the problem, the solution, and the individual contributions of its members, and how well the team responds to the Jury's questions.

The final score for a project is the arithmetic mean of the scores awarded by the Jury members present at the judging session.

Tie-Breaking Criteria

In the event of equal final scores, ranking is determined, in order, by the higher score obtained on: (1) relevance to the announced theme; (2) technical complexity and quality of execution; (3) functionality and completeness of the working demo; (4) clarity of the presentation. The decision of the Jury is final and cannot be appealed.

VI. Scientific Paper / Showcase

Each team submits a written project description together with an oral presentation and, where applicable, a poster or demonstration stand. The project must address a novel or clearly justified problem within the fields of AI or signal processing, and must reflect the participants' own original contribution.

Evaluation takes place in three stages: review of the written project description, an oral presentation followed by a question-and-answer session with the Jury, and review of the poster or demonstration stand.

Each member of the Jury awards a maximum of 100 points, distributed as follows:

Criterion	Max. Points
Novelty, originality, and creativity of the proposed topic	30
Scientific / technical rigor of the approach	15
Clarity in defining the project's objectives	10
Complexity and depth of the research or development process	10
Clarity of the presentation (visual and oral) and quality of the stand	15
Individual contribution and quality of teamwork	20
Total	**100**

The final score for a project is the arithmetic mean of the scores awarded by the Jury members. Should any single score deviate from the mean of all scores by more than 15 points, that score is excluded and the final score is recalculated as the mean of the remaining scores.

Tie-Breaking Criteria

In the event of equal final scores, ranking is determined, in order, by the higher score obtained on: (1) novelty, originality, and creativity; (2) scientific/technical rigor; (3) complexity and depth of the research; (4) clarity of presentation; (5) clarity of objectives; (6) individual contribution and teamwork. If a tie still persists, a panel of three Jury members designated by the Jury chair will re-evaluate the tied projects.

The decision of the Jury is final and cannot be appealed.

Results will be published in accordance with applicable data protection (GDPR) principles. Prize-winning participants' names may be published only with their prior written consent.

VII. Ethics and Integrity

Mentors and participants are responsible for ensuring that all submitted work complies with applicable research ethics and reflects the team's own original contribution; ideas may be inspired by existing literature, but the final project must be the team's own work.

The following are not permitted at any exhibition stand or demonstration area:

- Hazardous, flammable, or strongly odorous chemical materials, and biological or human/animal tissue samples.
- Weapons, sharp or explosive devices, unprotected lasers, or sources of ionizing or harmful radiation.
- Electrical equipment posing a risk to participants or the public (e.g., damaged batteries or unprotected high-voltage components) without adequate safeguards.
- Sponsor logos, banners, or promotional material other than that of the participant's own institution, unless integral to the project itself.
- Photographs or recordings that could identify a person without that person's consent.

Participants who breach these provisions may be disqualified or have their score reduced, at the decision of the Organizing Committee and the Jury.

VIII. Prizes

For each competitive section of the event — the AI Competition, the Hackathon, and the Scientific Paper / Showcase — three prizes will be awarded, corresponding to 1st, 2nd, and 3rd place.

Additional special prizes may be offered by partner organizations, universities, or sponsors. Where applicable, the criteria for these special prizes will be communicated to participants during the opening ceremony.

IX. Final Provisions

This regulation supersedes any previous version of the event's rules upon its approval by the General Commission.

All committee members, mentors, and participants are expected to act in good faith and in the spirit of fair, respectful, and collaborative competition throughout the event.