



The Official Handbook for Country Organizers of
**The World Artificial Intelligence
Competition for Youth 2021**

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1. Overview

1.1 Synopsis

The World Artificial Intelligence Competition for Youth (WAICY) is a competition where students around the world showcase their learning in artificial intelligence (AI). The first inaugural WAICY took place in Pittsburgh, Pennsylvania, the United States on July 28th, 2018, on the campus of Carnegie Mellon University. The competition showcases the impact of artificial intelligence on the future world through the minds of young students. WAICY aims to bring AI to students all around the world and spark creative, innovative, and artistic demonstrations of the technology that can make the world a better place.

The competition is open to all students around the world under the age of 18. To participate in WAICY, students must prepare a project that showcases an AI solution for a real-world problem. There are no limitations to the format of the project (coding demo, essays, visual prototype, etc.) as long as it uses AI and addresses a societal problem. Past competition topics have ranged from recycling, senior care, to cookie-baking.

For an example of a past student project, see:

- Elementary school: [Baking Companion](#)
- Middle school: [Dr. Cozmo](#)
- High school: [Wanda & Cozmo](#)

Although these example projects are made with Cozmo and Calypso, your WAICY projects don't need to be limited to that combination, or any hardware at all. The videos above provide some ideas for your projects and show how a previous WAICY was run.

2. AI Showcase

2.1 Task

Students design and **demonstrate** how AI can solve a real-world problem. There are three parts to the showcase. The maximum time allotted for a single team is 15 minutes.

1. [5-min Presentation] Teams will deliver an oral presentation on background information regarding the project as well as any additional details.
 - a. The presentation should focus on various steps of the **project** production.
 - b. Student(s) can talk about their goals, themes, stories, design, production, etc.
 - c. As long as it's relevant to the project, there's no limitation on what the presentation can include.
 - d. Visual aids (slides or insertion of other videos) are allowed. All non-original videos must be cited.
 - e. Any number of registered members of a team can participate in the oral presentation.
2. [5-min Demonstration] Teams will showcase demonstrations of an AI-powered solution to the problem being addressed.
 - a. There is no limit as to the format of the demonstration.
 - b. The project can be a simulation of the solution.
 - c. Narration, human-AI interaction, and audience participation are allowed during the demonstration.
3. [5-min Live Q&A] Students will participate in a Q&A where the judges can ask any clarifying questions about the project.

2.2 Team Information

1. Teams **may be composed of** 1-5 students.
2. Any help from personnel beyond the team members is considered coaching. Coaching is only allowed prior to the start of the presentation. Q&As should be answered only by the participants and not the coach.

2.3 Participation

Participants will be given a time slot for presentation and are required to be either connected online or physically on-site during the allocated time slot. During a virtual WAICY, participants can choose to participate in two ways:

1. Video only

- a. Participants choosing to participate by video only must submit their entire presentation prior to the competition day. The deadline for this submission will be announced on the [website](#).
 - b. The video shouldn't be longer than 12 minutes.
 - c. Participants should take into consideration questions that might have been asked if they were presenting live and answer those in the video itself either through slides or orally.
2. Video + Live
- a. If participants choose to participate live, they will have to do a 10-minute presentation that includes their slides & demonstration. Participants can choose to show a pre-recorded demonstration as well. However, the total presentation time cannot exceed 10 minutes.
 - b. After the presentation, the judges will ask questions regarding the entire project. The Q&A session will go on for 5 minutes.
 - c. Participants must stay online during the entire time slot. For more on this, refer to 2.1.
 - d. The Q&A session will be conducted in English, but the use of an interpreter is allowed.
 - e. The absence of team members during the Q&A session is subject to forfeiture of the Q&A session and the related points.

2.4 Eligibility

1. If a student or student team represents an organization, the organization may send multiple teams.
2. Each team should consist of between 1-5 persons.
3. Each student is only allowed to participate on one team.
4. Coaching is allowed. However, the coach's role is to facilitate the preparation only. Therefore, coaches are not allowed to be part of the demonstration, presentation, or engage in the Q&A. If the organizing committee or the judging panel rules that any coach's involvement is beyond the reasonable limit, the team will be disqualified immediately and no certificate will be awarded.

2.5 Rubric

The teams will be considered in their grade level (if there are multiple grade levels, the average grade will be considered). The score for each team is based on the demonstration, the oral presentation, and their performance during the Q&A session. The scoring criteria are as follows:

2.5.1 AI & Tech Criteria (50%)

The entire project should demonstrate the following aspects:

1. **Artificial Intelligence:** The project should demonstrate a thorough understanding of the Five Big Ideas and leverage AI's unique abilities to tackle the problem at hand. (25 points)
2. **Technology:** The presenter/team should have a mastery of software development and execution; the solution should be effective and efficient. (25 points)

The [Five "Big Ideas" in AI](#) are proposed by [the AI for K-12 working group](#) (Touretzky, Gardner-McCune, Martin, Seehorn, 2018). Click on the link above for more details.

2.5.2 Design & Impact Criteria (50%)

Teams are also given a score based on:

1. **Design:** The project creatively uses visual and auditory design; careful thought is given to the user experience of the proposed AI solution. (10 points)
2. **Problem Statement:** The project addresses a problem of national or local importance; the team can articulate the meaningful impact on multiple fronts. (10 points)
3. **AI Ethics:** The project considers the solution from its design to implementation; the team takes into account unintended consequences. (10 points)
4. **Presentation & Communication:** The team is very well prepared and delivers ideas in a clear, concise, and enthusiastic manner; the team gives thoughtful answers in Q&A. (10 points)
5. **Originality & Creativity:** The project is unique and demonstrates an exciting and fresh idea. (10 points)

Teams can score a maximum of 10 points in each criterion, totaling 100 points when combined with the AI & Tech criteria. The official grading rubric for WAICY 2021 can be found [here](#).

Teams will be scored by a panel of judges. The award ceremony will take place after all the teams have presented.

2.6 Divisions

Teams, based on their average grade as of the registration deadline and their choice of platform, will be divided into three divisions - elementary, middle and high school. Within each division, grade information will be available to the judges and will be reflected in the scores.

2.7 Awards

1. Certificate of Participation
2. Prizes & Awards
 - a. Gold, Silver, Bronze award: The projects that fall in the top 3 scores respectively will be awarded Gold, Silver, and Bronze in all three categories. (Categories are elementary, middle, and high school)

- b. AI Excellence: The team or participant who scored the highest under the AI criteria.
- c. Design Excellence: The team or participant who scored the highest under the Design criteria.
- d. Impact Excellence: The team or participant who scored the highest under the Problem Statement & AI Ethics category.

2.8 Become a Certified Host

Hosting your own WAICY is fun and easy! Either you are a school, after-school program, or other organization. Most of the information that you need will be found in this kit. To get started, please reach out to us at info@waicy.org.

2.9 Country Representatives

We are hoping to make WAICY more accessible to students from countries that haven't yet participated and are therefore looking for passionate individuals who can help us make that dream come true. If you're interested in becoming a country rep for WAICY, complete the form on this [page](#) and our team will be in touch with the next steps.

WAICY Country Representatives get to bring multiple teams to the main competition and also get featured in our newsletters, digital networks, etc. Additionally, Country Representatives are welcome to be guest speakers during the main event. Please note that there can be multiple individuals representing the same country.

For any questions and more information, reach out to us directly at info@waicy.org.