

Reference

Global IT Olympiad for School Students

Website of the Global IT Olympiad: <https://goit.space>

Olympiad Dates: March 5 to June 3, 2025.

Registration of participants: March 5 to April 10, 2025 (inclusive).

The Olympiad is organized by the Government of Nizhny Novgorod Region.

International partner of the Olympiad - The Union of Informatics of the Republic of Cuba.

The General Partner of the event is Sberbank, and the Technology Partner is Algorithmics International School of Programming and Mathematics.

The IT Olympiad is part of the activities of the world-class NEIMARK Inter-University IT Campus.

School students from Russia and other countries aged 14 to 18 (inclusive), regardless of experience and knowledge in programming, are invited to take part in the Global IT Olympiad. The key selection criteria: the participant must not be younger than 14 or older than 18 years old on the starting date of Stage I of the Olympiad; the participant must be a student of a comprehensive school.

Participation in the contests of the Olympiad will help enhance knowledge in Machine Learning and Artificial Intelligence, Cybersecurity, Cryptography, Forensics, Reverse Engineering, Vulnerability Exploitation, Algorithmic Programming. Challenges and learning materials reflect current trends in Artificial Intelligence and Cybersecurity.

The Olympiad will take the form of Capture The Flag cybersecurity competitions. Participants will have to solve various cybersecurity challenges to find a flag — a special text string that confirms they have successfully completed a task. Such competitions help develop practical skills in cybersecurity, identify vulnerabilities and ways to fix them. These competitions are popular among school and university students, professionals, and companies specializing in data protection.

Participants are welcome to try their hand at challenges in:

- **Artificial Intelligence** - data processing and analysis, generation of simple ML models.
- **Cryptography** - message decryption, analysis of encryption algorithms, encryption breaking.
- **Forensics** - examining memory dump, data recovery, analysis of deleted files.
- **Web Security** - identification and exploitation of vulnerabilities (SQL injections, XSS, file upload attacks).
- **Reverse Engineering** - binary file analysis, program logic recovery, decompilation.
- **Basics of Programming and Algorithm Development** - development of algorithms, code logic, optimization of solutions.
- **Mathematical Logic** - parsing of logical expressions, handling of combinatorics and numbers.

Stages and Timing

The Global IT Olympiad consists of three stages: individual qualifications (online), team qualifications (online), and the finals (in-person).

- **Registration for the Olympiad:** March 5 to April 10, 2025 (inclusive).

Upon completion of the registration form, all participants will be offered tests to check the level of their knowledge in IT. An e-certificate will be awarded to participants according to the test results.

- **Online individual qualifications:** from April 2 to April 15, 2025 (inclusive).
The participant can set the challenge deadline that works best for them. At the first stage, participants will be given 15 exercises which are divided into three complexity levels (basic, medium, advanced) and cover key aspects of cybersecurity, including both theoretical and practical challenges in Information Security, Mathematical Logic, Basics of Programming and Algorithm Development, Artificial Intelligence, including data analysis, text processing, generation of simple models.
- **Capture The Flag online team contest:** from April 21 to April 25 2025 (inclusive).
The teams for the Olympiad will consist of five participants. They will be chosen from the best performers in Stage I. During the CTF contests, challenges will cover AI and Machine Learning, Cryptanalysis, Reverse Engineering, Web Vulnerabilities, Forensics, Algorithmic Programming.

Based on the results of the individual and team qualifications, the top teams (100 people) will be selected based on their total scores. These teams will be invited to the finals of the Olympiad.

- **In-person finals:** will take place from May 30 to June 3, 2025 at School No. 21 in Nizhny Novgorod. The Olympiad winners' award ceremony will take place during the Digitalization of Industrial Russia conference (CIPR 2025) in Nizhny Novgorod.