Approved by the Contest Committee of the Technology Contests for the purposes of the National Technology Initiative

Protocol No 1 dated December 11, 2019

Terms and Conditions
of the technology contest
in the field of artificial intelligence
for the purposes of the National Technology Initiative
(texts in Russian)<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> This document is the translation of the Russian version of «Terms and conditions of the technology contest in the field of artificial intelligence for the purposes of the National Technology Initiative», and contains the references to regulatory documents that may be available only in Russian. In case of any queries on these documents, compliance with the requirements or other questions, please contact the organizing committee by email: <a href="mailto:ai@upgreat.one">ai@upgreat.one</a>

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#### 1. General Information

- 1.1. These Terms and Conditions of the technology contest in the field of artificial intelligence for the purposes of the National Technology Initiative (hereinafter referred to as "Conditions") determine goals, tasks and procedure of the technology contest in the field of artificial intelligence for the purposes of the National Technology Initiative (hereinafter referred to as "Contest").
- 1.2. The Contest is organized as part of the system of the technology contests of the National Technology Initiative being an additional tool to develop an ecosystem of innovation in Russia and create breakthrough products in perspective industries.
- 1.3. The Contest is held in accordance with the Rules for Organizing and Holding the technology contests for the purposes of the National Technology Initiative and the Rules for Granting Subsidies from the Federal Budget for Organizing and Holding the technology contests for the purposes of the National Technology Initiative, approved by the Decree of the Government of the Russian Federation No 403 dated April 03, 2018 (hereinafter referred to as "Decree").
- 1.4. The purpose of the Contest is to overcome the technology barrier in the field of artificial intelligence (hereinafter referred to as "AI").
- 1.5. Tasks of the Contest:
  - 1.5.1. to develop software products and systems for automated (computerized) comprehensive analysis of texts in Russian;
  - 1.5.2. to form and support teams capable of overcoming technological barriers in AI:
  - 1.5.3. to concentrate science and technology developments, search and solve science and technology challenges in AI;
  - 1.5.4. to promote private investment attractiveness of the science and technology research as well as advanced products in AI.
- 1.6. The subject of the Contest is to select the best solution for automated detection of semantic mistakes in text documents among those developed by the participants. The task is to find out mistakes in texts provided in the form of academic essays.
- 1.7. The Contest is organized by the Joint Stock Company "Russian Venture Company" (RVC), which, according to the Decree, is the operator of technology contests (hereinafter referred to as "Operator").
- 1.8. The information about the Contest, list of available documents and materials (or references thereto), relevant information about the timeline, venue of final events can be found on the website of the Contest.
- 1.9. The official language of the Contest is Russian. The Organizing Committee should provide the foreign participants with the English translations of the documents and materials required for participation and translations of the Contest activities.
- 1.10. Basic Terms and Definitions:
  - 1.10.1. **Contest** is a technology contest for the purposes of the National Technology Initiative; an open contest to find science and technology problem solutions in the field of AI.
  - 1.10.2. **Contest Participant, Participant** is a Russian or foreign individual or legal entity, or a group of such entities whose application for participation in the

- Contest is approved by the Organising Committee. All requirements of the Conditions should apply to the Participant to the same extent as to the Team.
- 1.10.3. **Cycle, Contest Cycle** is a single time-frame of the Contest which lasts from the launch of the Cycle till its final event. The Cycle repeats within the Contest timeline until the technological barrier is overcome at the final test or the Contest timeline is expired.
- 1.10.4. **Contest Website, Website** is an official website of the Contest containing complete relevant information about the Contest and available at <a href="http://ai.upgreat.one/">http://ai.upgreat.one/</a>, <a href="http://en.ai.upgreat.one/">https://en.ai.upgreat.one/</a>.
- 1.10.5. **Jury** is a collegial body created in order to ensure scientific, methodological and expert support of the Contest activities, to hold expertise and approve intermediate and final test results of the Participants' developments, decide on the Contest winners and awardees. The Contest Committee approves the operating procedure and panel of judges.
- 1.10.6. **Official Inquiry** is any inquiry sent by the Organising Committee to the Team to the e-mail indicated by the Team upon registration.
- 1.10.7. **Operator** is Joint Stock Company "Russian Venture Company" (RVC) under the Decree, assigned with functions of the technology contest operator for the purposes of the National Technology Initiative, and providing organizational, technical and communication support of the technology contests.
- 1.10.8. **Organising Committee, Committee** is a collective deliberative body carrying out coordination activities related to the preparation and holding of the Contest. The Operating Procedure of the Organising Committee approved by the Operator defines the Committee's plan of activities and its members.
  - The Chairman of the Committee is the Jury member appointed by the decision of the Contest Committee.
- 1.10.9. **Panel of Judges** is a body consisting of judges who monitor the testing procedure of the Contest. The operating procedure and the panel of judges are approved by the Operator.
- 1.10.10. **Partner** is a legal or private entity providing, upon an agreement with the Operator, financial and/or non-financial support aimed at achievement of the purposes and tasks of the Contest, formation of the Contest prize fund and/or announcement of the nominations within the Contest.
- 1.10.11. **Prize** is a monetary prize under the Conditions to be paid to the winner and awardees from the federal budget.
- 1.10.12. **Procedural Guidelines** is a document that determines the procedure for onsite rounds, including stepwise result recording and rules of procedure for the judges. The Procedural Guidelines do not make any modifications in the essentials, clauses and provisions of the Conditions and Technical Guidelines.
  - The Operator decides on the necessity of the Procedural Guidelines. The Operator approves the document, publishes it on the Contest Website with

the mark "Approved" and informs the Teams on it no later than one month before the Tests.

The document is due to modification before each new Cycle within the established timeline.

- 1.10.13. **Results Verification System (RVS)** is an automatic verification system that receives the Participant's file with solutions to the tasks of qualification and final rounds, processes the solution by comparing with the reference, and issues the comparison result. The RVS operation is described in the Technical Guidelines.
- 1.10.14. **Software System** is a software and, if applicable, hardware package developed by the Team for automatic processing of input data and providing the solution to the Contest task according to the timeline and form specified in the Technical Guidelines.
- 1.10.15. **Team** is a group of developers and specialists headed by a team leader. The team acts on behalf of the Contest Participant. All requirements of the Conditions should apply to the Team to the same extent as to the Participant. The Team should not include persons engaged in any other Contest activities, including documentation preparation and judging.
- 1.10.16. **Tests** are online (also "remote") and offline (also "on-site") activities organised as part of the Contest and aimed at examining and assessing the participants' Software Systems, their selection and determination of the Contest winners and awardees.
- 1.10.17. **Terms and Conditions, Conditions** is this document. The main document that determines the purposes, tasks and procedure of the Contest. The Contest Committee of the technology contests for the purposes of the National Technology Initiative approves the Terms and Conditions.
- 1.10.18. **Testbed** is a venue provided by the Operator or Partners to conduct tests.
- 1.10.19. **Technical Commission** is a collegial body consisting of experts in the field of AI and machine learning, verifying the technical aspects of Tests and their compliance with the Technical Guidelines. The operating procedure and membership of the Technical Commission are approved by the Operator.
- 1.10.20. **Technical Guidelines** is a document setting forth the technical requirements for Tests, Software Systems and other technical parameters of the Contest. The Technical Guidelines should not contradict the Terms and Conditions. The Technical Guidelines are approved by the Operator and are due to modification before each next Cycle within the established timeline.

## 2. Subject Justification

Modern artificial intelligence algorithms are based on methods of analysing correlations and statistical relationships in big data. When the machine makes a decision, it scans the embedded database of texts, finds the most frequently occurring connections, and based on this analysis gives the answer.

Such solutions, which are the most advanced, can answer only narrow questions, such as those implemented in phone voice assistants - Siri, Alice, Google Assistant, Amazon Alexa.

The most advanced indicator of the level of understanding for AI systems - the SuperGLUE metric was launched by DeepMind and Facebook in 2019 to determine the degree of understanding of the text by the machine. This is a short test of eight typical questions for understanding the meaning of the text (sentences). The subject should read the description of the situation and answer the question of how to interpret it.

The complexity of the task roughly corresponds to the level of primary classes. Current accuracy is up to 80%.

The new Up Great contest is aimed at creating new approaches in AI that will allow the machine to understand and take into account how the cause and effect are related. Such approaches will be useful in the processing of natural languages, and in many other areas of application of AI.

For the implementation of technologies for understanding the meaning of texts, the field of education has been chosen, since for educational texts there are proven methods of a relatively objective assessment of the quality of the text. In addition, training is an industry that is socially significant and in need of innovation.

The competition will create a technology that can find semantic errors in any texts and report it in real time.

The contest is held in the field of using technologies of machine text analysis to improve the quality and speed of identifying factual and semantic errors in the academic essays. Technologies developed as part of the competition will be able to become the core of a wide range of products.

Natural language processing (NLP) is a dynamically developing area of artificial intelligence that is in the focus of a large number of specialists and at the same time has a rather low "barrier to entry": to develop NLP solutions, a specialist does not need significant investments in equipment and fundamental scientific knowledge.

#### 3. Contest Terms

#### 3.1. General terms

- 3.1.1. The Contest is undertaken by competing teams, which attempt to overcome technological barrier.
- 3.1.2. The Contest is officially launched through a publication of the Conditions on the Contest Website.
- 3.1.3. The technological barrier is creation of a reliable Software System in the near real-time mode capable of finding the factual and semantic mistakes in academic essays of students.

The performance result should be the same as the performance of a specialist educator who works within the usual time constraints. These time limits correspond to the usual period spent by the tutors to check the work of similar scope in the same subject field (hereinafter referred to as "Technological Barrier").

3.1.4. General Requirements to the Software System:

Text to analyse	Set of essays, max. 12,000 characters each
Topics of the texts	A wide range of topics that is not limited to a small number of subject fields represented in general, additional and higher education
Analysed text language	Russian
Analysed text format	Electronic file in machine-readable format
Types of detected mistakes	<ol> <li>Discrepancy between given text topic and content</li> <li>Logical errors (conclusions are not based on arguments, themes are not supported by arguments)</li> <li>Inappropriate comparisons and metaphors</li> <li>Factual mistakes</li> </ol>
Required number of mistakes to detect	No less than an average number found out by the reference group of tutors in the same scope of essays (considering the incorrectly recognized mistakes, improper descriptions, wrong localization of mistakes)
Used software tools and computing capacity	No restrictions
Time restrictions for decision- making	No more than 30 seconds per essay

- 3.1.5. The Software System developed during the Contest should meet the requirements of the Conditions and Technical Guidelines.
- 3.1.6. The results achieved by the Teams in the course of the Contest are recorded in accordance with the Technical Guidelines and, if necessary, the Procedural Guidelines.
- 3.1.7. The Participants have to develop the Software System and demonstrate it in operation during the testing.
- 3.1.8. The Organising Committee reserves the right to request additional documents and/or information from the Participant at any stage of the Contest, including those required to ensure the Team participation in the Contest activities, impartial assessment of the Team and its Software System, confirmation of participation in the Contest from individuals and legal entities being members of the Participant.

## 3.2. Contest Cycles

- 3.2.1. The Contest is conducted by repeating Cycles.
- 3.2.2. The Cycle repeats within the general Contest timeline.
- 3.2.3. The Cycle includes the following rounds (stages, milestones):
  - 3.2.3.1. Preliminary round (off-site);
  - 3.2.3.2. Qualification round (off-site);

- 3.2.3.3. Final round (on-site and off-site).
- 3.2.4. Each next Cycle of the Contest is conducted if the Technological Barrier has not been overcome at the final stage of the current Cycle as provided by the procedures.
- 3.2.5. The teams whose applications have been approved by the Organising Committee are admitted to the preliminary round of the current Cycle.

## 3.3. Submission of applications

- 3.3.1. The application is submitted by filling in the electronic registration form by the Participant on the Contest Website.
- 3.3.2. The acceptance of applications for the current Cycle should end no later than 10 (ten) work days before the starting date of the Qualification round of the current Cycle.
- 3.3.3. Applications submitted after the timeline established for the current Cycle should not be accepted and are considered for participation in the next Cycle.
- 3.3.4. Upon completion of each Cycle, the lists of registrations for a new Cycle should be formed over again from the applications submitted for the upcoming Cycle.
  - 3.3.4.1. The team that participated in one of the previous Cycles and intends to participate in the next Cycle should upon request of the Organising Committee, confirm its participation in the next Cycle within the previously submitted application (application verification) without submission of a new application.
  - 3.3.4.2. In case of a change of the Participant who submitted the application and formed the Team, the application should be submitted all over again according to the procedure.
- 3.3.5. In case of identical names of several Teams, the Team that submitted the application later than the other one should change its name upon request of the Organising Committee.
- 3.3.6. The application contains the information as follows:
  - 3.3.6.1. name of the Contest applying for;
  - 3.3.6.2. name of the Team;
  - 3.3.6.3. name of the legal entity (if applicable) represented by the Participant, or the list of legal entities included in the group if the application is submitted on behalf of such group;
  - 3.3.6.4. brief description of the Participant's Team (no more than five sentences) specifying the existing developments and main goals of participation in the Contest;
  - 3.3.6.5. contact information: location (if applicable), actual address, telephone, website, e-mail;
  - 3.3.6.6. contact person for communication with the Organising Committee (hereinafter referred to as "Contact Person"): full name, contact telephones, e-mail.

- 3.3.7. The legal entities and individuals can participate as members of several Teams of the Contest.
- 3.3.8. Removal of any individual or legal entity from the Team should be based on the application of such entity or individual or the Participant's Contact Person.
- 3.3.9. In case of any change in the Team members initiated by the Contact Person, the person removed from the Team can apply with refutation to the Organising Committee within 10 days after publication of the updated list of participants on the Contest Website.
- 3.3.10. Inclusion of any individual or legal entity in the Team should be based on the application of the Contact Person.
- 3.3.11. Changes in the Team membership cannot be made later than 15 days before the starting date of the Final round of the current Cycle.
- 3.3.12. The application form is attached as Appendix 1 to the Conditions.

## 3.4. Participant and/or Team Disqualification

- 3.4.1. The Organising Committee reserves the right to cancel the submission, suspend the Team and/or Participant from participation in the Contest if there are any events of misconduct, forgery or violation of the Conditions or Technical Guidelines.
- 3.4.2. Suspension from participation in the Contest can also take place in the following cases:
  - 3.4.2.1. the documents submitted are invalid.
  - 3.4.2.2. the documents breach the legislation of the Russian Federation.
  - 3.4.2.3. the documents requested from the Team have not been submitted after 2 (two) official inquiries sent to the Team with at least 3 (three) day interval.
  - 3.4.2.4. the Team disseminates in public the information about the Contest, the Operator, Partners or other Participants that is not consistent with reality, offensive, discredits the persons listed or the Contest, violates moral and ethical norms.
  - 3.4.2.5. there are actions of the Team representatives aimed at making forgery or attempts to access the restricted datasets used to confirm overcoming of the Technology Barrier.
  - 3.4.2.6. there are actions of the Team aimed at receiving, disseminating and using information about errors or technical features of the Results Verification System, Contest Website, Technical Guidelines, Procedural Guidelines, Conditions, and other Contest regulatory documents as well as the technical solutions used in its course, and that can be used for getting unfair advantage in the course of the Contest. This also includes bias of the test results, decisions of the Jury, access to information about developments of other participants as well as failure to provide the Organising Committee with such information, if the Team has been aware of it.

## 3.5. Additional Terms of Participation

- 3.5.1. At least 2 (two) times during each current Cycle in which the Team participates, the Team should publish information concerning its participation in the Contest on the Internet, on any of its resources or resources of its members or partners (social networks, website, etc.).
- 3.5.2. Upon request of the Organising Committee, the Team should give comments and information on its participation in the Contest and Contest developments, including to representatives of the mass media. The Team has the right to determine the content of comments individually, and not to provide the mass media with information that can be treated as commercial secret or confidential.

## 4. Participants and Teams

- 4.1. The Russian and foreign legal entities and individuals are invited to participate in the Contest.
- 4.2. The groups (temporary multidisciplinary teams and group of companies) formed from Russian and foreign legal entities and individuals are eligible to participate in the Contest.
- 4.3. The Participant should form a Team to take part in the Contest events.
  - 4.3.1. Each Team should consist of at least 2 (two) and maximum 10 (ten) members, including the Team Leader.
  - 4.3.2. The same individual cannot be a member of two or more teams at the same time.
  - 4.3.3. The Team may consist only of citizens of full legal age or equivalent as provided by the emancipation of minors procedure according to the legislation of the Russian Federation.
  - 4.3.4. The Team includes the Team leader who is a member of the Team ensuring its administration, representation of its interests to the Organising Committee, Operator, Jury and other organizations involved in the organizing, holding and monitoring the Contest as well as control and responsibility for proper behaviour of all Team members.
  - 4.3.5. The Team leader status can be given to the other Team member:
    - 4.3.5.1. if the confirmation from the current Team leader is provided within the dates of the current Cycle.
    - 4.3.5.2. if the confirmation of all Team members is available and the Organising Committee cannot reach the current Team leader on the telephone number provided earlier and e-mail within 3 weeks from the date of the first request.
  - 4.3.6. The Participant cannot use the official Contest name or certain parts of the Contest name in its Team name.
  - 4.3.7. The Organising Committee can assign alphanumeric characters (identification number, or ID number) to the Team in each round of the Contest.

- 4.3.8. The Participant should use the Team's ID number as ordered by the Organising Committee during the Contest.
- 4.3.9. Interaction of the Team members and Participants out of the Contest activities should not be controlled and limited by the Organising Committee.
- 4.3.10. The name list of the Teams members is fixed 15 (fifteen) days before the starting date of the Final round.
- 4.3.11. In the course of the Final round, the Team leader:
  - 4.3.11.1. has the right to remove the member from the Team,
  - 4.3.11.2. cannot substitute the members in the name list of the Team,
  - 4.3.11.3. cannot expand the team.
- 4.3.12. The Team has the right to change its members during verification of application for the next Cycle.
- 4.4. The Participant conducts all the developments at its own expense. The Operator does not cover the Participant's expenses for participation in the Contest.
- 4.5. By submitting the application and participating in the Contest, the Participant in so doing agrees with and undertakes to follow the conditions of the Contest that are defined by the Terms and Conditions, Technical Guidelines and other documents relating to the organization and holding of the Contest and are published on the Contest Website.
- 4.6. Participants have the right to attract sponsors and partners in the process of development and construction of the Products.
- 4.7. Participation in the Contest is free of charge for the Participants.

#### 5. Procedure

- 5.1. Contest Periods and Rounds
  - 5.1.1. The timeline of the Contest is from December 15, 2019 till December 30, 2022.
  - 5.1.2. Each Cycle of the Contest consists of the following rounds:
    - 5.1.2.1. Preliminary round, with minimum duration of 3 months;
    - 5.1.2.2. Qualification round, with minimum duration of 1 month;
    - 5.1.2.3. Final round, with minimum duration of 2 weeks.
  - 5.1.3. The Cycles of the Contest are conducted at least once a year starting from 2020. The Operator determines the timeline for each Cycle and its rounds no later than a month before each Cycle.
  - 5.1.4. The Cycles are conducted until one or several Teams overcome the Technological Barrier during the Tests. Once the Technological Barrier is overcome, the Contest should be considered as completed, and the Tests should no longer be conducted.
  - 5.1.5. The Organising Committee reserves the right to change the periods of Cycles and rounds within each of the Cycles by placing the relevant announcement on the Website without changing the general timeline of the Contest.

- 5.1.6. The Participants should be notified of changes in the periods of Cycles and its rounds no later than a month before the Cycle starts.
- 5.1.7. The Participants should be notified of appointment and changes of dates of Tests and on-site activities no later than a month before the event.

#### 5.2. Preliminary round

- 5.2.1. The purpose of the Preliminary round is to select the Participants and carry out a preliminary assessment of their potential for overcoming the Technological Barrier
- 5.2.2. The round is off-site (remote).
- 5.2.3. The Organising Committee should check the applications for compliance with formal requirements within 5 work days after receipt thereof, including the following criteria:
  - 5.2.3.1. completeness and reliability of the provided information,
  - 5.2.3.2. clarity of presentation.
- 5.2.4. After the application is reviewed, it receives the Participant status via a notification to the email specified in the application.
- 5.2.5. The list of Teams that have passed the Preliminary round is published on the Website. The Operator updates the status of each Team with regard to the current Cycle of the Contest.
- 5.2.6. The full list of Teams that have passed the Preliminary round are published on the Website no later than 5 (five) work days upon completion of the Preliminary round.

#### 5.3. Qualification round

- 5.3.1. The task of the Qualification round is to select the Teams for the Final round by competition of the developed products of the Teams in solving the qualification assignments.
- 5.3.2. The Teams that have successfully passed the Preliminary round should be admitted to the Oualification round.
- 5.3.3. The Qualification round consists of:
  - 5.3.3.1. confirmation of the Team participation;
  - 5.3.3.2. receipt of assignment by the Team;
  - 5.3.3.3. assignment processing using the Software System developed by the Team;
  - 5.3.3.4. sending the solution for its assessment to the RVS (Results Verification System) and Panel of Judges;
  - 5.3.3.5. approving of the results by the Organising Committee.
- 5.3.4. The Qualification round is held off-site (remote).
- 5.3.5. To pass the Qualification tests, the Team should develop the Software System that can process a set of texts (essays) as required by cl. 3.1.4 hereof.
- 5.3.6. All Teams should at one time get access to the materials required for performance of the Qualification round task.
- 5.3.7. The task solution is uploaded into the RVS provided by the Operator as specified in the Technical Guidelines.

- 5.3.8. The RVS algorithm is described in the Technical Guidelines and available for testing by the Teams.
- 5.3.9. The Organising Committee has the right to provide the Teams with the opportunity to test the methods for uploading their solutions in RVS. The Operator should inform the Teams on its test dates and time no later than 10 work days before it starts.

#### 5.3.10. Determination of the finalists

- 5.3.10.1. The Panel of Judges checks the solutions of the Teams. Then the Technical Commission verifies the test results that are submitted to the Organising Committee for approval.
- 5.3.10.2. The Team passes the Qualification round if the number of correctly recognized mistakes in its solution exceeds the number of incorrectly recognized ones. Such Team receives an invitation for participation in the Final round.
- 5.3.10.3. The Teams that have passed the Qualification round should, within two days, confirm their participation in the Final round upon request of the Organising Committee.
- 5.3.10.4. The Participant should be given the benefit in case of any disputable situation in scoring.
- 5.3.10.5. The Organising Committee publishes the list of Teams that have successfully passed the Qualification round on the Contest Website within 5 work days after its approval.
- 5.3.10.6. If none of the Participants has successfully passed the Qualification round, the Final round is conducted in this Cycle.

#### 5.4. Final round

- 5.4.1. Purpose of the Final round is to determine the winner and awardees of the Contest.
- 5.4.2. The Final round can be conducted on-site and off-site.
- 5.4.3. The Teams that have successfully passed the Qualification round are admitted to the Final round.
- 5.4.4. The Final round consists of:
  - 5.4.4.1. confirmation of the Team participation;
  - 5.4.4.2. receipt of assignment by the Team;
  - 5.4.4.3. assignment processing using the Software System developed by the Team;
  - 5.4.4.4. sending the solution for its assessment by the RVS (Results Verification System) and Panel of Judges;
  - 5.4.4.5. check of assessment results by the Technical Commission;
  - 5.4.4.6. in case of overcoming the Technological Barrier, approval of the results by the Jury.
- 5.4.5. To pass the Final tests, the Team should develop the Software System that can process a set of texts (essays) as required by cl. 3.1.4 hereof.

- 5.4.6. The Participant should provide the Organising Committee with supporting documentation within the period no later than 10 work days before the final tests, including:
  - 5.4.6.1. Statement of Responsibility of the Teams.
  - 5.4.6.2. Consent to personal data processing form each Team member.
- 5.4.7. Upon request of the Organising Committee, the Participant should provide the original documents from the set of supporting documentation in a mutually agreed manner.
- 5.4.8. In case the Participant provides the supporting documentation later than required, the Organising Committee has the right not to admit the Participant to the next round of the current Cycle but to reserve the possibility to participate in the next Cycle.
- 5.4.9. Supporting documentation is submitted in the form of scanned copies of signed documentation and uploaded in the relevant section of the Contest Website Personal Account or by e-mail to <a href="Mailto:AI@upgreat.one">AI@upgreat.one</a> if agreed with the Organising Committee.
- 5.4.10. The Participant should be fully responsible for reliability of information contained in the supporting documentation.
- 5.4.11. Supporting documentation recognized as non-compliant with the formal requirements set forth by the Terms and Conditions is rejected whereof the Organising Committee notifies the Participant. The Participant should have the right to re-submit the supporting documentation within the period agreed upon with the Organising Committee.
- 5.4.12. The information provided by the Participant should not violate the third persons' rights, including the rights to intellectual property, rights to protection of reputation. If the Participant needs to use the intellectual deliverables or equivalent means of individualization of legal entities, goods, works, services owned by the third parties, the Participant should have the relevant rights and bear the individual responsibility for violation of the specified intellectual rights during the Tests in relation to the right holders or other third persons.
- 5.4.13. The Organising Committee has the right to provide the Teams with the opportunity to test the methods for uploading their solutions into RVS. The Operator should inform the Teams on its test dates and time no later than 10 work days before it starts in accordance with the Technical Guidelines.
- 5.4.14. Final Test Procedure:
  - 5.4.14.1. In the course of the final tests, the performance results of the Software Systems of the Teams should be checked for compliance with the requirements set forth in cl. 3.1 hereof.
  - 5.4.14.2. All Teams should at one time get access to the materials required for performance of the Final round task.
  - 5.4.14.3. The task solution is uploaded in RVS provided by the Operator as specified in the Technical Guidelines.
  - 5.4.14.4. The RVS algorithm is described in the Technical Guidelines and available for testing by the Teams.

- 5.4.14.5. The performance results of the Software Systems of the Participants (essays with detected mistakes in the format described in the Technical Guidelines) are sent to the Panel of Judges in anonymized form.
- 5.4.14.6. The Panel of Judges should jointly review the detected mistakes, verify and reject the mistakes, create and approve the benchmark mistake markup for each essay within the periods and in a format described the Technical Guidelines.
- 5.4.14.7. The benchmark mistake markup and solutions of the reference group of tutors are uploaded into RVS.
- 5.4.14.8. The solutions of the Teams and reference group tutors are compared with the benchmark mistake markup approved by the Panel of Judges. The percentage of compliance with the benchmark markup, including penalty and bonus points, is calculated according to the methods described in the Technical Guidelines and is the metrics showing the result of the Team and reference group tutors with regard to the benchmark markup.

If one or several Teams show the result that is not worse than the average result of the reference group tutors, the Technological Barrier is deemed overcome.

#### 6. Announcement of the Results

#### 6.1. Determination of the winner and awardees

- 6.1.1. Upon completion of the final tests, the Organising Committee sums up the results formed by the RVS, protocols of the Panel of Judges and Technical Commission, and records the results achieved by the Participants, as well as overcoming/failure to overcome the Technological Barrier by each of the Team.
- 6.1.2. The Contest winner is the Team that developed the Software System capable of overcoming the Technological Barrier and demonstrated the best result among the other Teams.
- 6.1.3. The Contest awardees are the Participants who developed Software Systems capable of overcoming the Technological Barrier and demonstrated the second and the third results after the winner.
- 6.1.4. If according to the test results, the Panel of Judges put on record the overcoming of the Technological Barrier, the final test results should be sent for the Jury's review.
- 6.1.5. Next Cycles following the current one are not conducted in case of overcoming of the Technological Barrier and approval of the Contest results by the Jury.
- 6.1.6. If none of the Teams has overcome the Technological Barrier in the current Cycle, the next Cycle starts within defined timeframes.

6.1.7. If none of the Teams has overcome the Technological Barrier in the last Cycle within the established timeframe of the Contest, the Technological Barrier is deemed not overcome.

## 6.2. Appeals

- 6.2.1. In order to comply with the rights of the Participants and uniform requirements in the evaluation of the Software Systems, as well as to resolve disputes, an Appeal Commission is created headed by the chairman in accordance with the provision on the Appeal Commission, which is approved by the Operator.
- 6.2.2. Based on results of each stage of the Contest, the Participant should have the right to submit a written protest concerning the breach of the established Contest procedure and (or) disagreement with the obtained results.
- 6.2.3. The Team leader of the Participant submits the objection in writing not later than 24 hours after round results are published and the objection is submitted against such results.
- 6.2.4. The Appeal Commission accepts and reviews the Participants' appeals and protests, makes the final decision according to the protest review results, informs the Participant, who has made the protest, on the decision made. The Appeal Commission decisions are made by a simple majority of votes; in case of equal voices, the chairman of the Appeal Commission should have the casting vote.
- 6.2.5. The Participant's protest review period makes 10 work days. If the Participant's protest review and relevant decision-making requires longer period, the Organising Committee should inform the Participants of prolongation of the protest review period upon request of the Appeal Commission.
  - The timeline for the consideration of the Participant appeals is 10 work days. In case more time is required to consider the appeals and protests and to make a decision, the Organising Committee notifies a Participant on extension of the time for the consideration upon request made by the Appeal Commission.
- 6.2.6. The decision of the Appeal Commission is final and cannot be appealed.
- 6.2.7. The decision of the Appeal Commission is drawn up in the form of the protocol to be signed by all the Commission members who reviewed the protest.
- 6.2.8. The decision of the Appeal Commission drawn in the form of the protocol should be brought to the Participant's notice and, if necessary, submitted to the Organising Committee and the Jury for approval and making necessary amendments to the Jury's protocols.

#### 7. Prizes to the Winner and Awardees

7.1. Prizes to the winner and awardees are paid only if they overcome the Technological Barrier. Overcoming the Technological Barrier is confirmed by the solution of the Technological problem during the final tests. The overcoming of the Technological

Barrier is recorded based on the results of the final tests generated by the RVS, protocols of the Panel of Judges, and the protocol of the Technical Commission. In case none of the Participants can overcome the Technological Barrier, the prize is not paid to any of the Participants.

- 7.2. The prizes are paid to the winner and the awardees based on the protocol prepared by the Jury about the winners and awardees through the Project Support Fund of the National Technology Initiative.
- 7.3. The prize, which comes from the federal budget, can only be paid to legal entities or individuals that are tax residents of the Russian Federation.

  If the winner or one of the awardees, is a foreign organization or an individual that is not a tax resident of the Russian Federation, the Prize is not paid out to such Participant from the federal budget, and the right to receive the prize is not transferred to other Participants.
- 7.4. If the awardees are a group of legal entities or individuals, the prize is divided between them in equal parts, unless otherwise provided by the agreement signed between such entities or persons. In case of such agreement, the Participant should inform the Organising Committee thereof within 3 work days after the Participant is determined as a winner or awardee and hand over the agreement to the Organising Committee in an agreed manner.

In case of absence of the indicated notification and in case of failure to provide the specified agreement, the Operator reserves the right to pay the prize to the awardees in equal parts.

When the prize fund is to be divided between legal entities and individuals, the foreign legal entities and individuals included in the members of the Participants and not being the tax residents of the Russian Federation are not taken into account.

- 7.5. If the prize recipient is the number of legal entities and individuals that is not possible to divide the prize amount between them in equal parts, unless otherwise provided in the agreement mentioned in the cl. 7.4 of the Terms and Conditions, the result of dividing the prize amount by the total number of members of such Team is rounded off for the benefit of the individual or legal entity that was specified first in the list submitted in the application for the Contest. Rounding off is made to the unit roubles.
- 7.6. If three or more Participants overcome the Technological Barrier, the Participant that achieved the best result according to the final tests receives the prize in the amount of RUB 70,000,000 (seventy million), and the Participants who demonstrated the second and third results receive the prizes in the amount of RUB 17,000,000 (seventeen million) and RUB 13,000,000 (thirteen million), correspondingly. The Participants who demonstrated the result lower than the third one cannot claim the prize.
- 7.7. If two Participants overcome the Technological Barrier, the Participant that achieved the best result according to the final tests receives the prize in the amount of RUB 80,000,000 (eighty million). The Participant who achieved the second result will receive the prize in the amount of RUB 20,000,000 (twenty million).
- 7.8. In case one Participant overcomes the Technological Barrier, this Participant receives the Prize in the amount of RUB 100,000,000 (one million).

- 7.9. If none of the Participants overcomes the Technological Barrier, the main prize in the amount of RUB 100,000,000 (one million) is awarded to none of the Participants.
- 7.10. The Operator, together with the partners (sponsors) of the Contest, can award other prizes that are not set forth in the Terms and Conditions.

#### 8. Additional Terms and Conditions

- 8.1. Environmental and Safety Regulations
  - 8.1.1. The activities of the Participants as part of the Contest should comply with the environmental standards and safety requirements valid in the Russian Federation.
  - 8.1.2. Any acoustic, electro-magnetic, laser, optical and other radiation emissions should comply with the standards applicable in the Russian Federation.
  - 8.1.3. In case of on-site activities, the Organising Committee provides the Participants with rules on safety and environmental protection, with which all members of the Team should be familiar with and comply with.
  - 8.1.4. The Organising Committee reserves the right to disqualify the Participant in case of violation of requirements set forth herein.

#### 8.2. Intellectual Property

- 8.2.1. The Participants reserve all rights to their intellectual property and copyright items related to their Software System. The exception is made for public information related to the Participant's Software System passed to the Organising Committee.
- 8.2.2. No actions of the Organising Committee and the Jury can be directed to the disclosure and dissemination of information about technologies that can be patented by the Participants according to the current legislation, unless otherwise agreed with the participants.
- 8.2.3. Information about the product, partners, and sponsors of the Participant disclosed to the Operator by the Participant as well as information received during the evaluation of the Product can be distributed only in part related to the organization and safety of the Contest, or upon the Participant's consent.
  - All persons having access to such information should sign a non-disclosure agreement with the Operator.

#### 8.3. Changing the Contest Conditions

- 8.3.1. The Contest can be cancelled or its terms can be changed if circumstances have been identified that impede the conduct and (or) summing up of the results of the competition, and also if:
  - 8.3.1.1. less than two applications are selected for the Contest or less than two Participants remain at any round;
  - 8.3.1.2. the Technological Barrier determined by these Terms and Conditions is overcome by the persons that do not participate in the

- Contest and its solution is publicly announced (publicly demonstrated) before the Contest results are known;
- 8.3.1.3. during the Contest, it is determined that solution of the technological problem is not possible to get or additional time is required to get such solution that considerably exceeds Contest timeline;
- 8.3.1.4. force majeure circumstances prevent conducting of the Contest;
- 8.3.1.5. any changes made to the Terms and Conditions are to be published on the Website.

## 9. Contest organising and funding

- 9.1. Organising and conducting of the Contest is provided by the Operator for the account of the federal budget, own Operator's and Partners' funds (if applicable).
- 9.2. Amount of the federal budget subsidy provided to the Operator for financial support of Operator's expenses and realisation of the Contest is RUB 66,000,000 (sixty-six million).
- 9.3. Amount of the federal budget subsidy provided to the Operator for financial support of Operator's expenses for the Prize of the Contest is RUB 100,000,000 (hundred million).

#### 10. Contest Activities

- 10.1. During the Contest, the Operator holds the following activities in 2019:
  - 10.1.1. Official announcement of the Contest.
- 10.2. During the Contest, the Operator performs the following activities in 2020:
  - 10.2.1. The First Cycle of the Contest
- 10.3. During the Contest, the Operator performs the following activities in 2021-2022:
  - 10.3.1. The second and further Cycles of the Contest according to the timeline approved by the Operator.
- 10.4. For the purpose of optimization of federal subsidy funds expenditure, events specified in clauses 10.1. 10.3. and separate expenses of the Operator related to their organization can be combined with the events and expenses related to the other technology contests organized by the Operator.

Appendix 1
to the Terms and Conditions
of the technology contest
in the field of artificial intelligence
for the purposes of the National Technology Initiative
(texts in Russian)

## **Application form for the Participation in the Contest\***

Name of the Contest the application is submitted for	
Name of the Team	
Name of the Organization the Participant represents**	
List of individuals included in the Team (if the application is submitted from a group of individuals)	
Brief description of the Team (no more than 5 sentences) specifying the available developments and main objectives of participation in the Contest	
Contact information: registered and/or business address, telephone, website, e-mail of the official representative**	
Contact person for communication with the Organising Committee: full name, contact phone, e-mail.	

<sup>\*</sup>Application is filled out as the web form at the Contest Website; the format may differ from the one provided.

<sup>\*\*</sup>In case the application is submitted by a group of legal entities, information about all persons included in the association, should be provided.

Appendix 2
to the Terms and Conditions
of the technology contest
in the field of artificial intelligence
for the purposes of the National Technology Initiative
(texts in Russian)

# Operating Procedure of the Jury of the technology contest in the field of artificial intelligence for the purposes of the National Technology Initiative (texts in Russian)

#### 1. General provisions

- 1.1. The Jury of the technology contest in the field of artificial intelligence for the purposes of the National Technology Initiative (texts in the Russian language) is an expert body set up for scientific-methodological and expert support of the Contest and aimed at impartial decisions on the review of issues related to the intermediate and final results of the Contest.
  - 1.2. The Jury performs the following tasks:
- a) checks and considers applications for the Contest and supporting documents received from the Participants for compliance with the Contest requirements, determines the Contest participants based on the results;
- b) reviews and approves the expert examination and test results at each stage of the Contest, including the final tests;
- c) determines the Contest winner and awardees, signs the protocol being the basis for payment of prizes to the winner and awardees;
- d) participates in the processing of complaints of the Contest participants and makes relevant decisions.
- 1.3. In its activities, the Jury is guided by the Decree of the Government of the Russian Federation No. 403 "On Approval of the Rules for Organizing and Holding the Technology Contests for the Purposes of the National Technology Initiative and Rules for Granting Subsidies from the Federal Budget for Organizing and Holding the Technology Contests for the Purposes of the National Technology Initiative and Making Changes in the List of International, Foreign and Russian Awards for Outstanding Achievements in the Area of Science and Technology, Education, Culture, Literature, Art, Tourism and Mass Media, the sums under which Received by Taxpayers are not Subject to Taxation" dated April 04, 2018 (hereinafter referred to as "Decree"), Contest Task of the Technology Contest in the field of artificial intelligence for the purposes of the National Technology Initiative as well as this Operating Procedure of the Jury of the Technology Contest for the Purposes of the National Technology Initiative (hereinafter referred to as "Operating Procedure").
- 1.4. Approval of members of the Jury, changes to the membership, appointment of the members of the Jury and their termination is made by the Contest Commission for technology contests for the purposes of the National Technology Initiative of the Ministry of Science and Higher Education of the Russian Federation. This can be done on the proposal of the Operator and/or the interested federal executive authorities.

- 1.5. The Jury is headed by its Chairman appointed from the members of the Jury according to the Contest Commission decision.
- 1.6. The Jury consists of the Chairman of the Contest Organising Committee who is appointed from the members of the Jury according to the Contest Commission decision.

#### 2. Jury Meetings

- 2.1. The Jury Chairman approves the agenda of the meetings, presides at the meetings, creates the conditions for collective discussion and solving the issues proposed for consideration, and signs the protocol of the meeting. In case the Jury Chairman cannot participate personally in the work of the Jury, the Jury Chairman should assign the functions to the other member of the Jury by giving prior notice to such member and the responsible secretary of the Jury hereof.
- 2.2. The responsible secretary of the Jury appointed by the Operator should ensure the work of the Jury, including organization of and holding the Jury meetings, execution and signing of the protocol of the Jury, keeping records and storing the documentation of the Jury, collecting and provision of proper reporting documents of the Jury's activities, if necessary. In case of temporary absence of the responsible secretary, their duties can be assigned to the other person upon the Operator's decision.
- 2.3. The Chairman of the Organising Committee being a member of the Jury, should check and examine the applications of the Contest participants and supporting documents for compliance with the Contest requirements as part of the work of the Organising Committee, determine the Contest participants based on the results, review and approve the expert examination and test results at each stage of the Contest, including the final tests.
- 2.4. The Jury should act in the form of meetings and correspondence to update the Chairman's responsibilities.
- 2.5. The Jury members should make decisions by voting at the meetings or by correspondence (email).
- 2.6. The Jury meetings held both in the form of meetings and correspondence are legally qualified if more than 50% of the authorized members took part in the meeting. The authorized members whose decisions are received before the end date of acceptance as specified in the notice of the meeting are considered to take part in the meeting held in the absentee form.
- 2.7. The Jury decision should be made at the meeting by a simple majority of votes of the authorized members (more 50% of votes). If the Jury members cannot attend the face-to-face meeting, they can express their opinion in writing that is taken into account during the voting procedure.
- 2.8. The Jury meeting in the form of meetings and correspondence is recorded by the protocol to be signed by the Chairman and responsible secretary.
- 2.9. Within 5 work days after the protocol is signed, it should be sent to the Jury members and other interested parties who attended or had to attend such meeting.

#### 3. Rights and Obligations of the Jury Members

- 3.1. The authorized members of the Jury have the right to:
  - 3.1.1. participate in the meetings in person or send their representatives;
  - 3.1.2. request information about the work of Jury;
  - 3.1.3. request information about the decisions of the Organising Committee related to review of the participants' applications, expert examination and test results at each stage of the Contest, from the Chairman of the Organising Committee;

- 3.1.4. apply to the Operator and/or Contest Commission;
- 3.1.5. participate in the work of the Appeal Commission of the Contest;
- 3.1.6. withdraw from the Jury.
- 3.2. The Jury members are obliged to:
  - 3.2.1. participate in voting on the contest results, including determination of the Contest winners and awardees based on the results of final tests, and make decisions on the basis of own expert assessment and materials provided for consideration:
    - 3.2.2. abstain from voting in case of any interest.
      - 4. Responsibility and Confidentiality
- 4.1. All Jury members and responsible secretary should be responsible for the Jury activities within their responsibilities.
- 4.2. The Jury members should be personally responsible for disclosure of the information constituting the commercial secret and other legally protected secret as provided by the legislation of the Russian Federation.
- 4.3. The transfer of confidential information to the Jury members, including information constituting the commercial secret, should be performed after signing the relevant non-disclosure agreement by the Jury members.

Appendix 3
to the Terms and Conditions
of the technology contest
in the field of artificial intelligence
for the purposes of the National Technology Initiative
(texts in Russian)

# Jury members of the technology contest in the field of artificial intelligence

	Status	Name	Title
1	Chairman of the Jury	Aleksandr Povalko	General Director, Chairman of the Board of RVC JSC
2	Jury member	Konstantin Vorontsov	Head of the Machine Intelligence Laboratory, MIPT, Dr. PhysMath.Sci.
3	Jury member	Igor Drozdov	Chairman of the Board of Skolkovo Foundation
4	Jury member	Andrey Ivashchenko	Leader of the Work Group "Neuronet" of the National Technology Initiative
5	Jury member	Elena Kazakova	Deputy Director of the Center of Russian Language and Slavistics of the RAS, corresponding member of the RAS, Director of the St. Petersburg Institute of Pedagogy
6	Jury member	Konstantin Kaysin	Acting Director of the Center for Development of the Technology Contest System NTI, RVC JSC
7	Jury member	Evgeny Kovnir	General Director, Digital Economy ANO
8	Jury member	Ivan Kolomoets	General Director, Uchi.ru LLC
9	Representative of the Contest Organising Committee	Yury Molodykh	Head of projects of the Center for Development of the Technology Contest System NTI, RVC JSC
10	Jury member	Dmitry Peskov	Special Representative of the President of the Russian Federation for Digital and Technological Development
11	Jury member	Marina Rakova	Deputy Minister of Education of the Russian Federation
12	Jury member	Arkady Sandler	Director of the Center for Artificial Intelligence, MTS PJSC
13	Jury member	David Talbot	Manager of Machine Translation Department, Yandex LLC
14	Jury member	Oksana Tarasenko	The Deputy Minister of Economic Development of the Russian Federation.
15	Jury member	Grigory Trubnikov	Prime Deputy Minister of Science and Higher Education of the Russian Federation
16	Jury member	Andrey Ustyuzhanin	Head of the Scientific and Training Laboratory for Big Data Analysis Methods, NRU HSE
17	Jury member	Isak Frumin	Director of the Institute of Education Development, NRU HSE
18	Jury member	Ivan Yamshchikov	AI-Evangelist, ABBYY