

Mercury Challenge Rules

General Notes

- All Solvers will need to register on the Topcoder platform and assert eligibility to participate through the Topcoder Mercury Challenge page.
(<http://community.topcoder.com/longcontest/?module=ViewProblemStatement&rd=17231&pm=15000>)
- **Teaming is allowed.** Topcoder members are permitted to form teams for this competition. After forming a team, Topcoder members of the same team are permitted to collaborate with other members of their team. To form a team, a Topcoder member may recruit other Topcoder members, and register the team by completing [this](#) Topcoder Teaming Form. Each team must declare a Captain. All participants in a team must be registered Topcoder members in good standing. All participants in a team must individually register for this Competition and accept its Terms and Conditions prior to joining the team. Team Captains must apportion prize distribution percentages for each teammate on the Teaming Form. The sum of all prize portions must equal 100%. The minimum permitted size of a team is 1 member, the maximum permitted team size is 5 members. Only team Captains may submit a solution to the Competition. Topcoder members participating in a team will not receive a rating for this Competition. Notwithstanding Topcoder rules and conditions to the contrary, solutions submitted by any Topcoder member who is a member of a team but is not the Captain of the team may be deleted and is ineligible for award.

The deadline for forming teams is posted on the Topcoder challenge page. Topcoder will prepare a Teaming Agreement for each team that has completed the Topcoder Teaming Form, and distribute it to each member of the team. Teaming Agreements must be electronically signed by each team member to be considered valid. All Teaming Agreements are void, unless electronically signed by all team members by the date specified on the Topcoder Challenge Page. Any Teaming Agreement received after this period is void. Teaming Agreements may not be changed in any way after signature. The registered teams will be listed in the contest forum thread titled "Registered Teams".

- Organizations such as companies may compete as one competitor if they are registered as a team and follow all Topcoder rules.
- Relinquish - Topcoder is allowing registered competitors or teams to "relinquish." Relinquishing means the member will compete, and we will score their solution, but they will not be eligible for a prize. Once a person or team relinquishes, we post their name to a forum thread labeled "Relinquished Competitors." Relinquishers must still submit their final write ups & system diagrams as explained below to maintain leaderboard status.

- In this match you may use any programming language and libraries, including commercial solutions, as long as you have the rights to use them in all manners in which you are using them and have paid for all usage fees, if required.
- If your solution includes licensed software (e.g. commercial software, open source software, etc.), you must include the full license agreements with your submission. Include your licenses in a folder labeled "Licenses". Within the same folder, include a text file labeled README.txt that explains how specifically each licensed software package is used in your solution. External data sets and pre-trained models are allowed for use in the competition provided the following are satisfied:
 - The external data and pre-trained models are unencumbered by legal restrictions that conflict with its use in the competition.
 - The data source or data used to train the pre-trained models is defined in the submission description.
 - You are legally able to use the data source and have paid for the usage fees, if required.
- Use the match forum to ask general questions or report problems, but please do not post comments and questions that reveal information about possible solution techniques.

Award Details and Requirements to Win a Prize

Prizes

The competition will be divided into two Periods. During each Period, there will be a Best Overall prize, as well as Category/Class incentives. The Prizes are described in the Mercury Challenge Prizes document.

Each Period is scored independently, so being best during the First Period is no guarantee of being best at the Second Period. Scoring will be calculated every two weeks. At that point, the Leaderboard will be updated. Final scores for Period will be calculated up to 30 days after the Period closes, and the winner calculations will begin.

Period 1: August 7, 2018* – October 31, 2018

* Note, the challenge begins on August 1, but scoring begins on August 7

Period 2: November 1, 2018 – January 31, 2019

* Note, the period begins on November 1, but scoring begins on November 7

~~Period 3: February 1, 2018 – April 30, 2019~~ The challenge has been shortened to 2 Periods

During each Period, Solvers will be eligible to win one (1) prize. Solvers will be ranked on their final overall score at the end of the Period and those who beat the baseline will be eligible for prizes. The top scorers will be awarded the Best Overall prize(s) according to the Mercury Challenge Prizes document. After the Best Overall prize(s) have been awarded, the remaining Solvers will be matched against the Country / Class prizes available in the Period based on their overall rank order. (Ex. In Period 1, the 4th

place finisher would then be matched against the remaining Country / Class prizes to see if they are the top scorer) Matching will be based upon the best score in the Country / Class amongst the remaining Solvers who have not yet achieved a prize during the period. During the Country / Class matching, if a Solver has the top score on multiple categories, they will be awarded only one prize. If a Solver is top on two Country/Class prizes of equal amount, they will be awarded the Country/Class prize where the distance between the first and second place is greatest. If two Solvers tie for the best in Country/Class, the prize will go to the Solver with the highest overall score.

The Best Undergrad Prize in Period 2 is awarded to the top overall score for a team comprised solely of Undergrad students who did not place in the top three. Proof of educational standing (such as a letter from the University, copy of current transcript or enrollment) will need to be provided as verification from all team members. Winners of the Best Undergrad prize are not eligible for any additional Country/Class Prizes during Period 2.

Prize Requirements

In order to receive a prize, you must do all the following:

- Achieve a winning score, as defined in the Challenge Handbook and Mercury Challenge Prize document, during the final Period Calculation.
- Once the final scores are posted and winners are announced, the prize winner candidates have 7 days to submit a report outlining their final algorithm explaining the logic behind and steps to its approach as well as a system diagram of your solution. You will receive a template that helps creating your final report. If your report is not sufficient, you will be contacted for clarifying questions. If your report is not complete, or able to sufficiently demonstrate a working system, your submission may be rejected. Reports will be reviewed for technical merit, but will not be judged on the writing style, grammar, or language.
- If you place in a prize-winning rank but fail to do any of the above, then you will not receive a prize, and it will be awarded to the contestant with the next best performance who did all of the above.

Submission Frequency & Format

The Challenge Handbook outlines the quantity and frequency of warnings that Solvers are allowed to submit on a daily and monthly basis. Additionally, the Challenge Handbook contains technical information related to creating a properly-formatted submission and documentation on how to use the Challenge API. It is the responsibility of the Solver to have read the Challenge Handbook and Challenge Problem Statement to understand these requirements.

These can be found in the Mercury Challenge GitHub Repository: <http://bit.ly/MercuryRepo>

In order to submit warnings, you must register for the challenge on the Topcoder platform (<http://community.topcoder.com/longcontest/?module=ViewProblemStatement&rd=17231&pm=15000>).

Additional Eligibility

To be eligible to win a prize under this competition, an individual or entity:

1. Must be (1) an individual or team of individuals each of whom are 18 years of age and over, or (2) an incorporated entity; and
2. May not be a federal entity or federal employee acting within the scope of their employment. An individual or entity shall not be deemed ineligible because the individual or entity used federal facilities or consulted with federal employees during a competition if the facilities and employees are made available to all individuals and entities participating in the competition on an equitable basis.
3. Must abide by the Topcoder platform eligibility requirements in addition to these requirements.

Federal grantees may not use federal funds to develop challenge solutions unless consistent with the purpose of their grant award. Federal contractors may not use federal funds from a contract to develop challenge applications or to fund efforts in support of a challenge submission.

Employees of IARPA, Booz Allen Hamilton, and Topcoder are able to compete in the challenge, but must forego any monetary prizes (see “Relinquish” above). Companies and contractors who are currently supporting, or who have previously supported, the above (or other) entities in efforts related to the IARPA Mercury Challenge are also not eligible to win monetary prizes. This restriction extends to members of such persons’ immediate families (spouses, children, siblings, parents), and persons living in the same household as such persons, whether or not related.

Mercury Program Performers are not eligible to compete in the challenge. Companies and contractors who are currently supporting, or who have previously supported, Mercury Program Performers in efforts related to the IARPA Mercury Program are also not eligible to participate in the competition. This restriction extends to members of such persons’ immediate families (spouses, children, siblings, parents), and persons living in the same household as such persons, whether or not related.

Federally Funded Research & Development Centers (FFRDCs) and (DoD) University Affiliated Research Centers (UARCs) not mentioned above may be eligible to submit forecasts and receive leaderboard recognition, but are not eligible to win monetary prizes (see “Relinquish” above).

Federal employees, employees of FFRDCs, and employees of UARCs can participate in the challenge as a private citizen, not affiliated with their organization, as long as (a) the Solver is not employed by an organization that is actively involved in the challenge; (b) the Solver has received approval from their organization, if applicable, to participate in their personal capacity (note, it is the Solver’s responsibility to verify this); and (c) Solvers cannot use government or their organizations’ resources, computers, or

access to government information in aid of their participation, except for those resources available to all other participants on an equal basis.

Entrants must agree to assume any and all risks and waive claims against the Federal Government and its related entities, except in the case of willful misconduct, for any injury, death, damage, or loss of property, revenue, or profits, whether direct, indirect, or consequential, arising from their participation in a competition, whether the injury, death, damage, or loss arises through negligence or otherwise.

Entrants must also agree to indemnify the Federal Government against third-party claims for damages arising from or related to competition activities. Entrants are not required to obtain liability insurance or demonstrate financial responsibility in order to participate in the competition.

By participating in the competition, each entrant agrees to comply with and abide by these rules and the decisions of IARPA and/or the individual judges, which shall be final and binding in all respects.

By participating in the competition, each entrant agrees to follow all applicable local, state, federal and country of residence laws and regulations.

Intellectual Property

- A. By entering, Solver agrees that: (i) all submitted copies of Solution Documents become Challenge Sponsor's property and will not be returned; (ii) subject to B below, Challenge Sponsor has the right to use, modify, reproduce, release, perform, display, or disclose all Solutions and non-proprietary Solution Description data within the U.S. Government without restriction; and to release and to disclose all submitted non-proprietary information outside the U.S. Government and authorized persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for U.S. Government Purposes; (iii) subject to B below, Challenge Sponsor and its licensees, successors and assignees have the right to use any and all Solution Documents & non-proprietary portions of Solution Descriptions, and the names, likenesses, voices and images of all persons appearing in the Solution Descriptions, for future advertising, promotion and publicity in any manner and in any medium now known or hereafter devised throughout the world in perpetuity without any right by you to inspect, approve, or disapprove the foregoing.
- B. Solvers are discouraged from including any proprietary information in their Solution Descriptions, and Challenge Sponsor reserves the right to reject a submission or request revisions where inclusion of proprietary information unreasonably interferes with full execution of the Challenge. By entering, Solver agrees (i) to limit the inclusion of proprietary information in its Solution Descriptions to only that which is reasonable and absolutely necessary; (ii) to mark all such proprietary information clearly and specifically, (iii) to engage in good faith discussions with Challenge Sponsor should it determine that inclusion of proprietary information interferes with full execution of the Challenge; and (iv) that Challenge Sponsor has the right to use, modify, reproduce, release, perform, display, or disclose all submitted proprietary information and data for

purposes of judging, administering, and overseeing the Challenge and to disclose all such information and data for the same purposes. Challenge Sponsor will make every effort to hold information marked as proprietary in confidence to the extent consistent with the rights stated in B(iv).

- C. All intellectual property ownership, if any, in the idea, concept, or activities demonstrated by the Submission will remain with the Solver. The Solver retains ownership of the Submission.
- D. The act of submitting a Solution does not create a confidential relationship or obligation of secrecy between Solver and any of the entities involved in this Challenge, however, the Government will not share Solver-submitted Solutions with other Solvers during the challenge.