General Provisions of the International Hackathon IceVision in July 2019

Participants of the hackathon are challenged to solve a computer vision task. To have a general understanding of the possible task in the final round, you can familiarize yourself with the example that is presented below.

In order to solve the competition task you will need to write a program. The program operation results in the pretest framework are evaluated automatically.

During the competition participants may use only their personal laptops and are allowed to choose any software that they consider appropriate. Organizers do not provide participants with any kind of hardware for task-solving. The use of virtual machines is not allowed. The only exception is the use of virtual machines provided by the organizers.

At the jury's request the participants shall be able to demonstrate the program operation using one or several sample video files.

List of Recommended Programs and Libraries

OpenCV, FFMpeg, or any other resources for processing videofiles and frames.

The following libraries are recommended when solving similar tasks:

PyTorch, TensorFlow, Keras as well as Computer Vision Toolbox(MATLAB) (you can request a trial version for the period of the competition)

General Information about the Round

Participants receive the problem statement formulated in natural language.

Training sequences and ideal solutions results of the task are available for your perusal. During the competition participants are expected to develop a program capable of solving the task and present the results in the required format. Participants will also be provided with test sequences. During the final round participants may submit their solutions based on the test sequences multiple times and see the results of their current solutions. Also participants may see the current results of all teams in the table, which will be regularly updated.

The next phase is an experiment. Participants are provided with the final sequences. Before the end of the phase participants are expected to submit their solutions based on the test sequence in the required format. At the end of the round the last submission will be counted as a final one to be evaluated. At this stage participants may not see their results and the results of the other teams. The final score will be calculated based on the results of the experiment phase.

All teams are also expected to pitch their solution to the jury. The best teams will present their solutions at the closing ceremony.

Sample Problem

You can refer to the problem of the qualifying round of IceVision as a sample problem.

The task for the qualifying round is to spot the traffic signs on the frames sequences. Samples for training, test, and final sequences are available on this link https://github.com/icevision/annotations . The information about the format of the output file, list of the traffic signs, as well as evaluation methods are available at https://github.com/icevision/score/blob/master/README.md. Other useful materials for task-solving are here: https://github.com/icevision