1. Challenge description

Gigapixel videography, beyond the resolution of a single camera and human visual perception, aims to capture large-scale dynamic scenes with extremely high resolution. Benefiting from the high resolution and wide FoV, it leads to new challenges and opportunities for a large amount of computer vision tasks. Among them, object detection is a typical task to locate the target that belongs to the category of interest in images or videos. However, accurate object detection in large-scale scenes is still difficult due to the low image-quality of the instances in the distance. Although the gigapixel videography can capture both the wide-FoV scene and the high-resolution local details, how to deal with these high-resolution data effectively and overcome the huge change of object scale has not been well studied.

The purpose of this challenge at ICIP 2021 aims to encourage and highlight novel strategies with a focus on robustness and accuracy in various scenes, which have a vast variance of the pedestrian pose, scale, occlusion, and trajectory. This is expected to be achieved by applying novel neural network architectures, incorporating prior knowledge insights and constraints. PANDA dataset (website: www.panda-dataset.com) will be used for this challenge, which consists of 555 representative images captured by gigapixel cameras in a variety of places. The ground-truth annotations include 111.8k bounding-boxes with fine-grained attribute labels including person pose and vehicle category.

2. Deadlines

April 15, 2021   Registration opening
April 30, 2021   Training data available
May 30, 2021   Testing data available
June 14, 2021   Result submission deadline
August 20, 2021   Challenge results announcement

3. Website

Our challenge is released on the website:
http://www.gigavision.cn/ICIP2021_main.html