Contribution ID: **162** Type: **Sectional reports**

Using distributed computing systems to solve the problem of image classification using deep neural networks

Tuesday, 6 July 2021 15:50 (15 minutes)

Machine learning methods and, in particular, deep neural networks are often used to solve the problem of image classification. There is a tendency to increase the amount of training data and the size of neural networks. The process of training a deep neural network with millions parameters can take hundreds of hours on modern computing nodes. Parallel and distributed computing can be used to reduce the learning time. The extensive scaling capabilities of grid systems and the ease of connecting new computing nodes can significantly reduce the training time of deep neural networks. But at the same time, we should take into account the specifics of data exchange between the nodes of the grid system. Using the example of the problem of classifying a large set of images, we propose methods for organizing distributed deep learning.

Summary

Primary author: KUROCHKIN, Ilya (IITP RAS)

Presenter: KUROCHKIN, Ilya (IITP RAS)

Session Classification: Big data Analytics and Machine learning.

Track Classification: 4. Distributed computing applications