

MLaaS4HEP: Machine Learning as a Service for HEP

Thursday 22 October 2020 11:20 (5 minutes)

Machine Learning is increasingly used in many fields of HEP and will give its contribute in the upcoming High-Luminosity LHC (HL-LHC) program at CERN. The raising of data produced needs new approaches to train and use ML models. In this presentation we discuss the Machine Learning as a Service (MLaaS) infrastructure, that allows to read data directly in the ROOT format exploiting the World-Wide LHC Grid (WLCG) infrastructure for remote data access, and provide pre-trained models via HTTP protocol. In particular, we demonstrate the usage of MLaaS solution for a concrete physics use-case based on $t\bar{t}$ Higgs analysis. We provide some details on this particular use-case and a measure of the performances.

Primary authors: GIOMMI, Luca (Universita e INFN, Bologna (IT)); KUZNETSOV, Valentin Y (Cornell University (US))

Co-author: Prof. BONACORSI, Daniele (University of Bologna)

Presenter: GIOMMI, Luca (Universita e INFN, Bologna (IT))

Session Classification: Workshop

Track Classification: 6 ML infrastructure : Hardware and software for Machine Learning