First CHIPP (fast) AI/ML & computing WS

- Welcome to the University of Geneva -

Tobias Golling,
University of Geneva

Idea born at CHIPP roadmap meeting in January

Special topic on ML chaired by Thea Aarrestad

Thanks to Thea and Mauro Donega, Teresa Montaruli, Steven Schramm, Anna Sfyrla for initiating this workshop!

https://indico.cern.ch/event/1325745/

Objectives

Map out CHIPP-AI landscape

Provide a platform for discussion & networking

Foster potential common projects

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Let’s get started !

Welcome & Introduction — *Tobias Golling*
MR060 10:00 - 10:05

Model agnostic searches in High Energy and Astrophysics with CURTAINs — *Debajyoti Sengupta*
MR060 10:05 - 10:17

Unsupervised tagging of semivisible jets with normalized autoencoders in CMS — *Florian Eble*
MR060 10:17 - 10:29

Cluster Scanning — *Mr Ivan Oleksiyuk*
MR060 10:29 - 10:41

Machine Learning Techniques to Probe HNLs at the FCC-ee — *Thomas Matthew Critchley*
MR060 10:41 - 10:53

Machine Learning Methods to search for a scalar partner of the top quark in all-hadronic tt-MET final states with the AT…
Mr Daniele Dal Santo

caffe
Uni Mail - University of Geneva 11:05 - 11:25

Masked particle modelling — *Samuel Byrne Klein*
MR060 11:25 - 11:37

PIPPIN: Generating variable length full events from partons — *Guillaume Quétant*
MR060 11:37 - 11:49

Surrogate model for optimization of PSI muEDM experimental design — *Ritwika Chakraborty*
MR060 11:49 - 12:01

Machine-Learning Enhanced Optimal Detector Design — *Kinga Anna Wozniak*
MR060 12:01 - 12:13

Active deep learning for single-particle beam dynamics studies — *Davide Di Croce*
MR060 12:13 - 12:25

LUNCH BUFFET

ML in CMS: new developments and challenges — *Davide Valsecchi*
MR060 13:25 - 13:37

Identification of Jets and Regions of Interest in the ATLAS Calorimeter with Deep Convolutional Neural Networks in Rea
Leon Bozianu et al.

Fast b-tagging at the ATLAS Trigger — *Lucas Bezio et al.*
MR060 13:49 - 14:01

Anomaly detection at the trigger level for LLPs — *Luca Hartman*
MR060 14:01 - 14:13

Vitis accelerator backend development for HLS4ML — *Konstantinos Axiotis*
MR060 14:13 - 14:25

Simulating Calorimeter Detector Signatures with the Lorenzetti Showers Framework for Electron Trigger Studies using …
Meinrad Moritz Schefer

Deep Learning-Based Data Processing in Large-Sized Telescopes of the Cherenkov Telescope Array: FPGA Implementa…
Iaroslava Bezshyiko

Towards an AI-based trigger system for the next-generation of imaging atmospheric Cherenkov telescope cameras
Tjark Miener

CAFFE
Uni Mail - University of Geneva 15:01 - 15:35

Machine Learning in b -> s ll — *Jason Aebischer*
MR060 15:35 - 15:47

Measurement of event shapes in minimum bias events from pp collisions at 13 TeV — *Weijie Jin*
MR060 15:47 - 15:59

GNN event interpretations at LHCb and SHIP — *William Sutcliffe*
MR060 15:59 - 16:11

Neutrino Reconstruction with Graph Neural Network on SND@LHC — *Zhibin Yang*
MR060 16:11 - 16:23

Human-in-the-loop Reinforcement Learning for Data Quality Monitoring in Particle Physics Experiments
Olivia Jullian Parra

The DL Advocate: playing the devil's advocate with hidden systematic uncertainties — *Shah Rukh Qasim*
MR060 16:35 - 16:47

DISCUSSIONS