

Inference in iLCSoft/Marlin

- run PV & SV finder, jet clustering and vertex refinement of LCFIPlus
- run Marlin processor that calculates and stores features needed for the flavor taggers

Training

- store variables in root files with four trees (charged, neutral, jets, sv)
- convert trees in root files to pandas dataframes, do some checks and cleaning and store them in hdf5-files
- do further pre-processing and training in pytorch
- use pytorch-to-torch script from Lennart to convert trained model into model that can be used in C++ scripts

Inference

- store variables via PIDHandler
- run Marlin processor for tagging with ParticleNet Model
 - read feature values from PIDHandler
 - store them in the vectors needed by the ParticleNet Model (coordinates of const., features of the const., coordinates of SV, features of SV)
 - convert vectors to torch tensors and do the pre-processing
 - do the inference with the converted trained model
 - store output again using PIDHandler
- run Marlin processor to store outputs in trees and histogram that can be used to calculate ROCs etc.