



Recipe on accessing MVA isolation training (2017v2)

Tau POG – 27 Mar 2017

Speaker:

Olena Hlushchenko



RWTHAACHEN
UNIVERSITY

- Signal and background are taken the same as for the last official 2016 MC training
- Training strategy as for the uploaded 2017v1 (dR=0.5) and 2015 (dR=0.3)
- Training is done for:
 - dR=0.5 Old DM : "2017v2"
 - dR=0.5 New DM : "newDM2017v2"
 - dR=0.3 Old DM : "dR0p32017v2"
- Payloads are uploaded to the database
 - See the available payloads in appendix
- The WP are confirmed to be exclusive
- Study of dR=0.5 old DM is shown

1. Download and place in YOUR python directory module that constructs a configuration for rerunning the tau sequence for different discriminators:

https://github.com/greyxray/TauAnalysisTools/blob/CMSSW_9_4_X_tau-pog_RunIIFall17/TauAnalysisTools/python/runTauIdMVA.py

2. Add to you pset (but import from your python dir):

https://github.com/greyxray/TauAnalysisTools/blob/CMSSW_9_4_X_tau-pog_RunIIFall17/TauAnalysisTools/test/produceTauIdMVATrainingNtupleMiniAOD_cfg.py#L119#L124

```
from TauAnalysisTools.TauAnalysisTools.runTauIdMVA import *
na = TauIDEmbedder(process, cms,
    debug=True,
    toKeep = ["2017v1", "2017v2", "newDM2017v2", "dR0p32017v2", "2016v1", "newDM2016v1"]
)
na.runTauID()
```

3. Define handles to access discriminators in the analysis module:

https://github.com/greyxray/TauAnalysisTools/blob/CMSSW_9_4_X_tau-pog_RunIIFall17/TauAnalysisTools/test/produceTauIdMVATrainingNtupleMiniAOD_cfg.py#L207#L268

```
# 2017 v2
byIsolationMVArun2017v2DBoldDMwLTraw2017 = cms.string('byIsolationMVArun2017v2DBoldDMwLTraw2017'),
byV LooseIsolationMVArun2017v2DBoldDMwLT2017 = cms.string('byV LooseIsolationMVArun2017v2DBoldDMwLT2017'),
byV LooseIsolationMVArun2017v2DBoldDMwLT2017 = cms.string('byV LooseIsolationMVArun2017v2DBoldDMwLT2017'),
byLooseIsolationMVArun2017v2DBoldDMwLT2017 = cms.string('byLooseIsolationMVArun2017v2DBoldDMwLT2017'),
byMediumIsolationMVArun2017v2DBoldDMwLT2017 = cms.string('byMediumIsolationMVArun2017v2DBoldDMwLT2017'),
byTightIsolationMVArun2017v2DBoldDMwLT2017 = cms.string('byTightIsolationMVArun2017v2DBoldDMwLT2017'),
byVTightIsolationMVArun2017v2DBoldDMwLT2017 = cms.string('byVTightIsolationMVArun2017v2DBoldDMwLT2017'),
byVVTightIsolationMVArun2017v2DBoldDMwLT2017 = cms.string('byVVTightIsolationMVArun2017v2DBoldDMwLT2017'),
```

4. Update your analysis sequence:

https://github.com/greyxray/TauAnalysisTools/blob/CMSSW_9_4_X_tau-pog_RunIIFall17/TauAnalysisTools/test/produceTauIdMVATrainingNtupleMiniAOD_cfg.py#L321#L322

```
process.p = cms.Path(process.rerunMvaIsolationSequence
* process.NewTauIDsEmbedded # *getattr(process, "NewTauIDsEmbedded")
* process.produceTauIdMVATrainingNtupleMiniAODSequence)
```