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Logistic regression method for particle identification in MPD experiment

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This work shows the application of logistic regression model for particle identification task in Multi Purpose Detector (MPD) experiment on Nuclotron based Ion Collider Facility (NICA) at Joint Institute for Nuclear Research. The model has been tried on Monte-Carlo dataset provided by MPDRoot software package and compared against n-sigma method, included in MPDRoot, and XGBoost gradient boosted decision tree method, previously investigated. Feature importance analysis was conducted to explore the possibility to decrease model size and increase computational speed.

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