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After the Higgs boson discovery at the LHC in 2012, the standard model seems to be complete. However, a further consistency check is required to determine whether or not it is the Higgs boson predicted by the standard model.

We are also facing the phenomena that cannot be explained by the standard model such as dark matter and matter-antimatter asymmetry.

The LHC is the place where the unknown phenomena can be made. In particular, with a huge amount of data from the LHC, the artificial neural network can help us find answers in this journey towards possible new physics.